

MAN AND HIS CHANGING SOCIETY

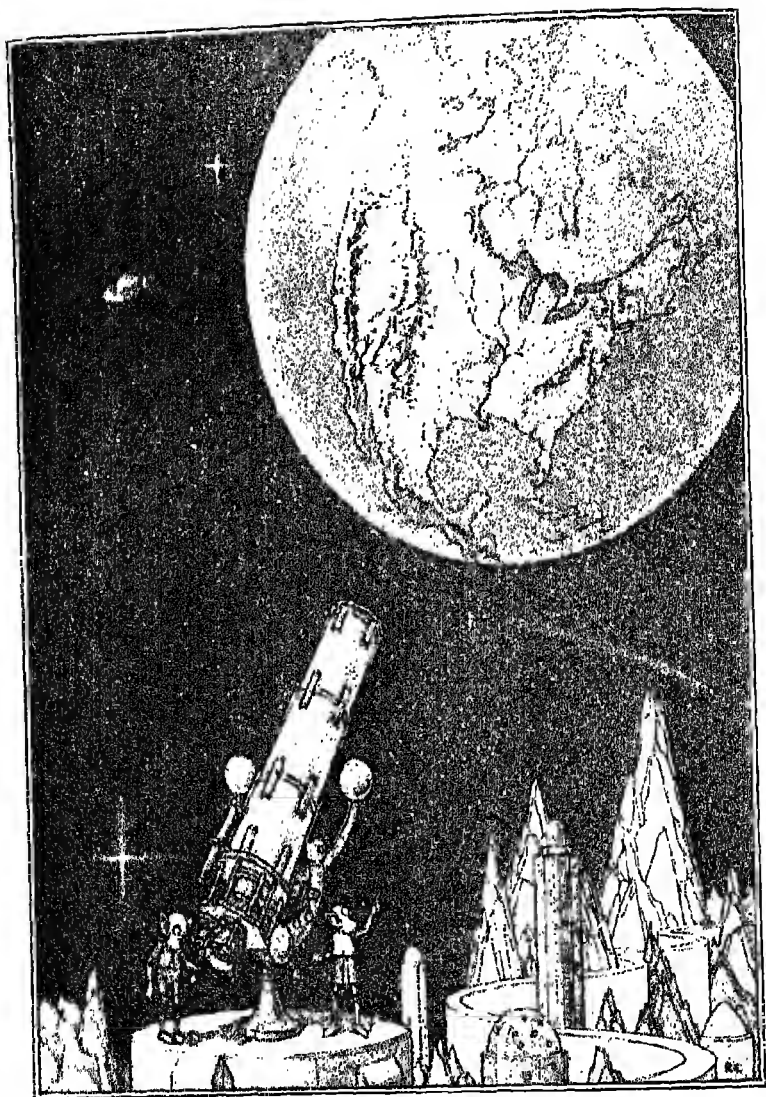
The RUGG Social Science Series

VOLUME FIVE

of the First Course

The Building of America





Drawing of Martians looking at the earth

The Building of America

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INTRODUCING THE BUILDING OF AMERICA

We are beginning one of the most exciting stories of this series of books — the story of the making of our country. Part of that story you already know from another book, *Communities of Men*. But in that book we were chiefly interested in the way single communities grew. In *The Building of America* we shall try to see more of the whole picture of the land that stretches across the continent of North America, and of the people who came to make their homes upon it.

Perhaps the best way to study our country is to see it growing, part by part, as the people built it. For our America was not settled all at once, from coast to coast. It grew gradually, region by region, much as did China and India and other countries long ago.

Region by region it was built — that's the important thing in our story. Our country, like those that we have studied in *Peoples and Countries*, is made up of several natural regions. Each one is different in climate and natural resources from every other one. One region is covered by an enormous level plain of fertile soil and enjoys a favorable climate. This our people have made one of the richest corn and wheat gardens

of the world. Another has just the right climate and soil to produce cotton, and has been known for a long time as "the cotton kingdom." A third vast region, a thousand miles wide by a thousand miles long, is covered by high, rocky, and wooded mountains, but down deep in them are rich layers of gold and silver, as well as copper and iron and other metals. In each of these regions a few large cities and many towns and villages are to be found. In still another region of our country there are many large cities, fine harbors and ports, thousands of factories and warehouses, offices and stores. This part of America is one of the greatest industrial regions of the world.

In this book we shall live over again the building of America. We shall travel the seas with Columbus and the Cabots to get the first glimpse of the strange land. We shall sing and dance and work with the Indian tribes who lived in their different ways in widely separated regions of the red man's continent. We shall pack up and move out of Britain with the brave discontented Englishmen who founded our first settlements. We shall live over some of the trials and pleasures of those peoples who built homes all along the Atlantic coast. In this way nearly three hundred years of history will pass quickly through our minds.

Next we shall become a part of that great westward movement that rolled across the Appalachian Moun-

Introducing The Building of America vii

tains, spread out over the broad central plain, crawled in prairie wagons, on horseback, and on foot across the Western mountains, and thereby conquered the continent. We shall learn how villages and towns grew slowly behind this westward-moving horde of frontiersmen. Finally we shall see people inventing engines and machines and power stations and building railroads and canals, automobiles, airplanes, telegraphs and telephones and radios. The whole story of an industrial country which was written for England and France and Germany will be repeated in *The Building of America*.

So it is that, living over again in imagination the lives of the builders of America, we shall see America building. As each region unfolds before our eyes, we shall learn how nature's special gifts of climate and soil, forests and minerals, helped the people to make it into the way of living that it is. So *The Building of America* weaves together into one story the history of the way our country was settled and the geography of climate and natural resources that made it possible.

Finally, we should like to tell you that we have written this book because we believe that no one who crosses the continent with our pioneer forefathers can fail to understand our America or, understanding it, can fail to love our country and believe in it.

HAROLD RUGG
LOUISE KRUEGER

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The Building of America

PART I

Introducing Our Country

CHAPTER I

Our Country: The United States of America

WHO ARE those queer-looking gentlemen in the colored picture at the front of the book? Let us suppose that they are "astronomers," men who study the stars and other bodies in the universe. They are on the planet Mars and are looking at our own planet, the Earth. They are talking about our country.

"Look! there it is, on North America," says one of them. "They call it the United States of America. What a country that is! It seems to have everything that people who live on the Earth need."

"Everything?" asks the other.

"Yes, everything! Notice where it is located — in the region north of the Earth's equator. Most of the important countries are in that same zone. The climate must be especially good or else there must be several kinds of climate. In the north of that country they can raise wheat and corn; in the south, oranges and lemons."

"It is large," says the other, swinging his telescope around over Europe and Asia; "nearly as large as all of Europe."

"Yes," agrees the first Martian. (We call the people who live on Mars the Martians.) "It is large. But notice it more closely. See that low, level plain in the middle — between the mountains on the east and west? That plain has a million square miles of the richest farming land on the Earth. The people can raise almost everything they need."

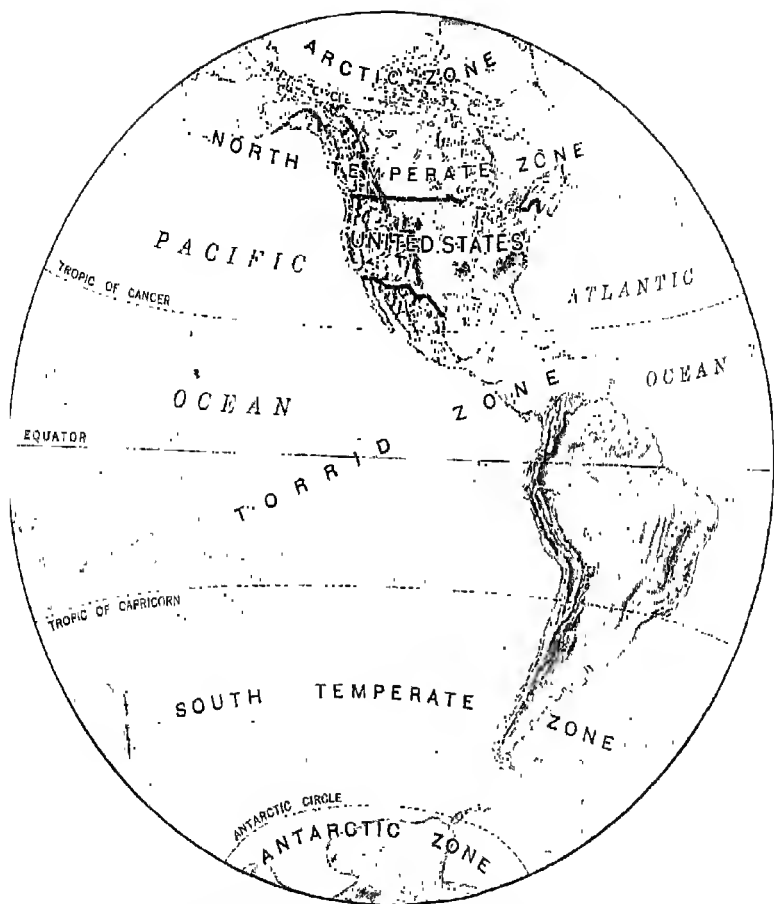
"How about those high mountains?" asks the other. "They are not good for farms."

"No, but even the mountains are a blessing to the Americans. Look at the forests with their wonderful trees for lumber. In those low mountains on the east is some of the best coal on the Earth. The high ones on the west have large amounts of copper and gold and silver and other metals. And iron! Not even Europe has better iron fields."

The first speaker from Mars was becoming more interested.

"Look at that wiggly coast line and see what good harbors there are! A large port city has grown up at almost every one. And see the Great Lakes, those large bodies of water in the middle of the country. What a fine place for ships to travel and carry things and people from one part of the country to another!"

"Yes," agrees the second Martian, "the United States does seem to have about everything that the people could need."



MAP 1. This globe of the Western Hemisphere shows our country's location in the north temperate zone



Now let us "come down to earth," and look more closely at our country. Were the Martians right? Does the United States have about everything?

From the stories in this book we shall be able to answer that question. They will tell us of the land and of its people. They will give us word pictures of its mountains and its plains, its farms and its villages, its mines and its power stations where electric power is made, its towns and its cities.

Some of the stories will tell us how the people now called Americans first came here, where they came from, and why they came. They will tell of how the people struggled to build homes on the land, how they tried always to make better ways of living.

The Vast Size of Our Country

Even in the beginning of our study we can catch a glimpse of this country that was built on the continent of North America. Think of some of the things the men from Mars said about the United States. Think first of its great size. It is about 3000 miles from the Atlantic coast to the Pacific coast. It is more than

1000 miles from Canada, our northern neighbor, to Mexico, on our southern boundary. As the Martians said, the United States is nearly as large as all of Europe.

There is an interesting way to compare the size of our country with others that you know. Lay a piece of thin paper over a globe and mark around the boundary of the United States. Then cut around the line. Do the same for some other large countries, like Russia and China and Brazil; and then for some small ones, like Great Britain and Italy.

We learned these things in *Peoples and Countries* :

Russia: the largest country	8,116,000 square miles
China: the second	4,300,000 square miles
Canada: the third	3,695,000 square miles
Brazil: the fourth	3,286,000 square miles
United States of America: the fifth .	3,027,000 square miles

Do your "cutouts" agree with what you learned before about the size of countries?

The Location on the Earth

The Martians seemed to think that the location of our country on the earth was a fortunate one. Most of it lies in the north temperate zone, between 30° north latitude and 50° north latitude. Our northern states are far up in the north temperate zone, and



MAP 2. These maps show the areas and sizes of the five largest countries of the world. How does the United States compare with the others?

our southern ones lie near the tropical region of the Gulf of Mexico. Therefore, not all of our country is located in the same kind of region.

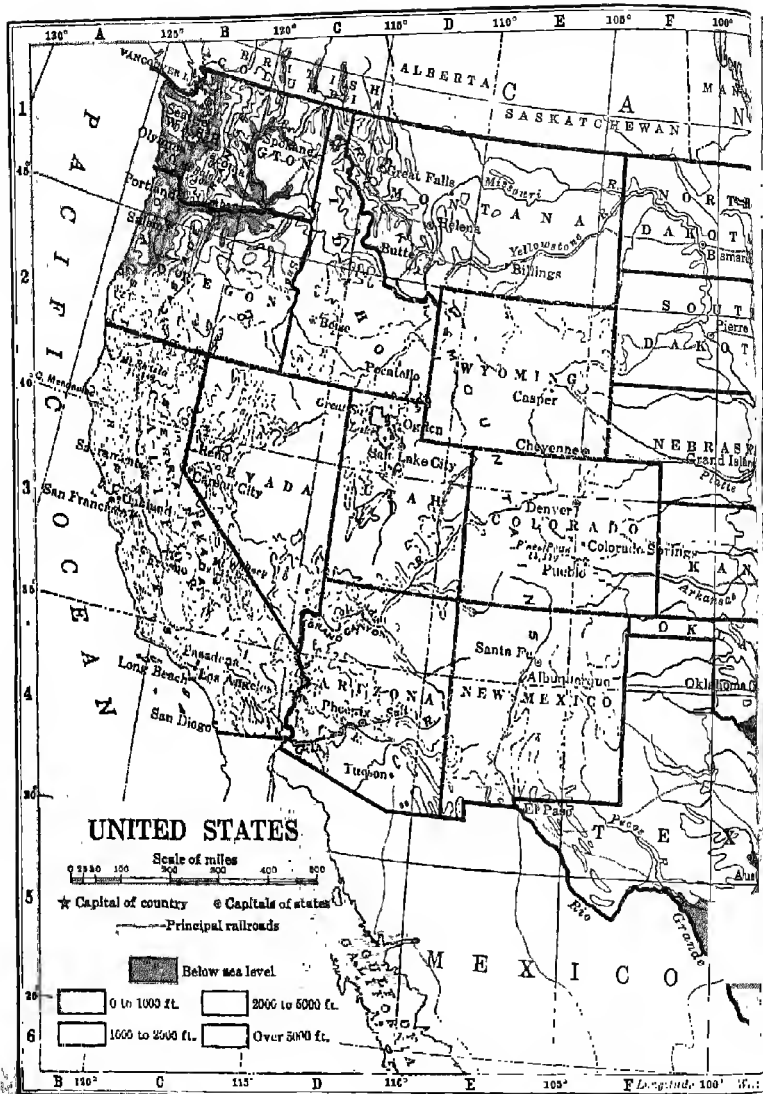
Let us see what that has to do with the land and the people.

The Climate of the Temperate Zone Is Stimulating

Think for a moment of a cool, sunny morning in late autumn. You get up feeling lively, hungry for breakfast, and in a hurry to be doing something out of doors. You are cheerful, ready for anything. You whistle or sing as you walk down the street. The air feels crisp, and you take a deep breath that tingles in your chest. The sun warms your back, but the wind in your face keeps you walking fast. A good day to play football, bright and snappy. It's good to be alive!

We sometimes use a word which is very "American" to name this feeling of good health. We call it "pep." There are better words, perhaps, but "pep" does tell by its very sound what it means. Americans are known the world over as a people of "pep," and one of the chief reasons is the location of their country in the north temperate zone.

Indeed, one of the reasons why they were able to build this country of ours is that most of them lived in this healthful climate.



MAP 3



The South Is Located Near the Tropics

The southern part of our country, along the Gulf of Mexico, is near the tropical region of the earth. Much of its southern boundary is located at about 30° north latitude. You know that most places located in the tropics have a hot and wet climate.

Some years ago one of the writers of this book spent some months in the Philippine Islands. These islands are in the tropics, stretching from about 4° latitude to about 21° latitude north of the equator. Day after day throughout those months the temperature stayed between 80 and 90 degrees. Sometimes it rose as high as 93 or 95 degrees. In January the sun beat down upon us about as in May.

At first we hurried about, as we had been used to doing in the cool climate of northern United States. But then, after a few weeks of this hurrying about, we began to feel tired. We perspired most of the time. We walked more slowly and worked less hard. Then we understood why people who live in such regions sleep at noon; why the shops are closed for two or three hours in the middle of the day.

Although our Southern states are not really in the tropics, they are near them. Their climate is warmer than that of the states of the North. We say it is a near-tropical, or subtropical, climate.

Location Helps To Decide the Climate

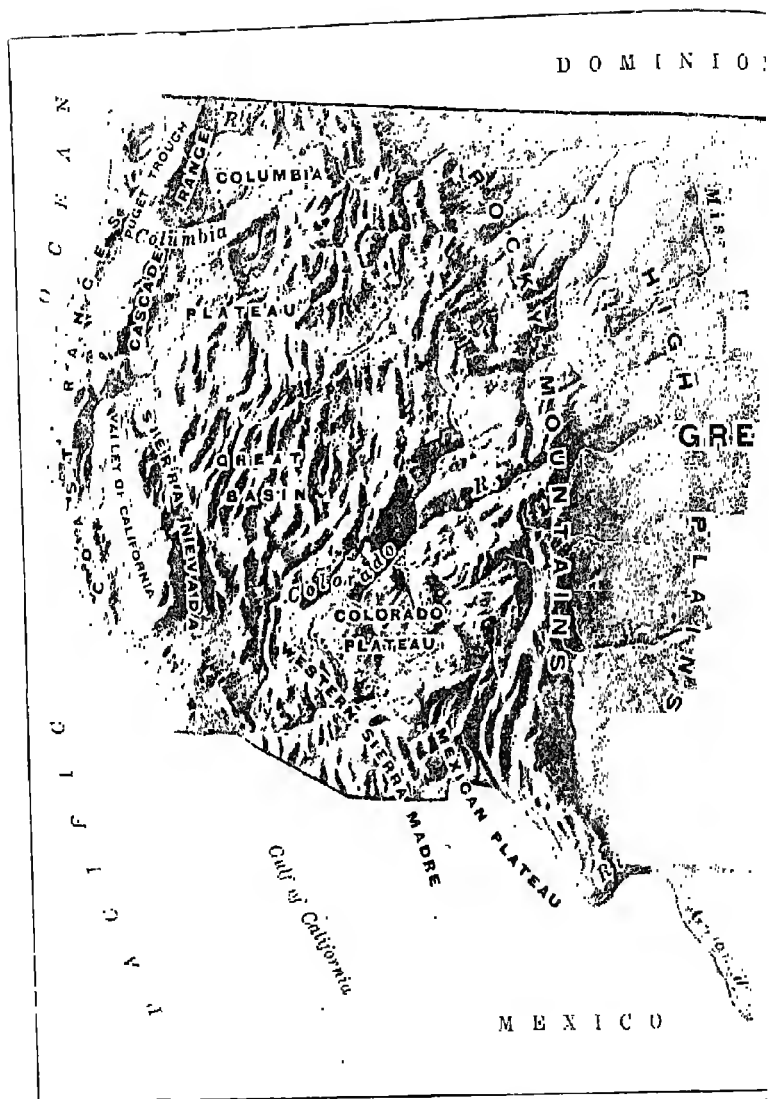
Now you can see why we say that our country is favorably located. As the men from Mars said, most of it is in a region on the earth where the climate gives energy and strength.

Nor is there only one kind of climate ; there are several kinds. Different things can grow in different regions.

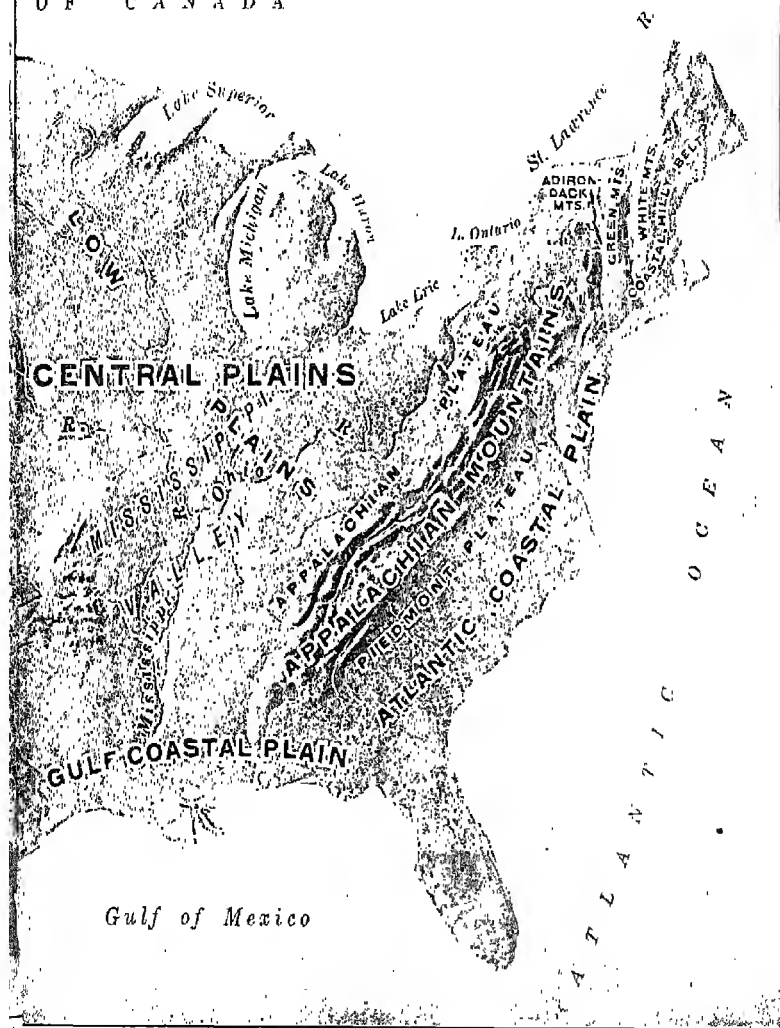
In many ways, then, the location has been favorable for the building of our country. Nature has been kind. Let us see other ways in which nature has helped.

Books You Would Like To Read

See the book titles at the end of Chapter II.



OF CANADA



regions of the United States

CHAPTER II

How Nature Divided Our Country into Regions

Do you remember from *Peoples and Countries* that the people in one part of a country often lived in different ways from those in another? The wheat and millet farms of North China are different from the rice paddies of South China. In India the rice fields of the low Ganges plain are very different from the gardens of Kashmir in the mountains of the north. Even in the little countries England and Italy the land and ways of living are different in different parts of those countries.

Indeed, in every country that we studied, there seem to be different parts. One part is cold and another is hot. One has high mountains and another is a level plain. In most countries nature has divided the country into different parts, or "regions." We call any part of a country which has a special kind of land and climate a "natural" region.

Natural Regions and Different Ways of Living

Are there natural regions in the United States also? The stories and pictures and maps in this book will help you to answer that question. Let's begin.

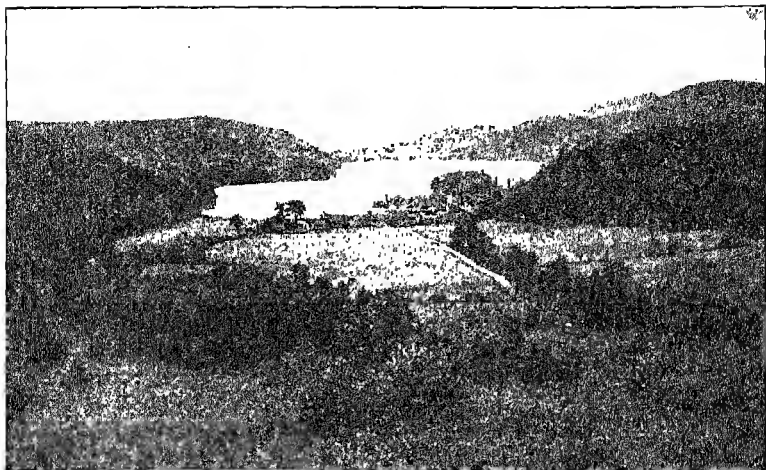


FIG. 1. Farming country in the rolling hills of New England. How is this natural region different from those in figures 3 and 4?



Ewing Galloway

FIG. 2. Can you tell why it would be harder to make farms in these Appalachian Mountains than in New England?

The study of other countries has shown us that differences in ways of living in different regions are due to several things. There are three very important ones:

First: differences in the height of the land

Second: differences in climate

Third: differences in "natural resources"

As we read about how the Americans built our country on the continent of North America we shall see how these three things taken together caused them to make different ways of living in the several natural regions.

Perhaps the clearest way is to see them on the maps on pages 10-11, 145, and 401. As we study we shall often turn to these maps. When we ask, "Did the height of the land have something to do with how this region was settled?" we shall turn to map 3, pages 10 and 11, to find the answer.

We shall also wish to know the climate, that is, the temperature and the winds and the rainfall of each region. Whenever we do, we shall turn to map 10, page 145. If we need to know what great resources were in the earth in each region, map 18, page 401, will help us.

Pictures will help as well as maps. Do the photographs of figures 1 to 5 tell us much about the natural regions of our country today?

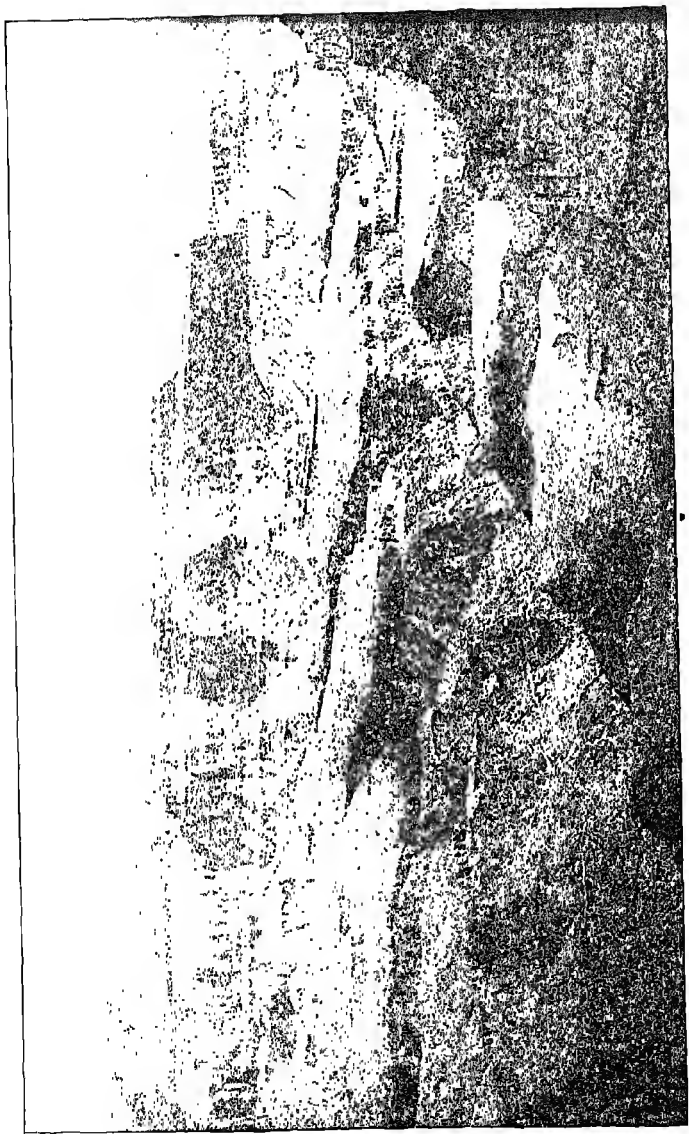


FIG. 3. Where the Colorado River has worn down the mountain plateau to make the Grand Canyon. Do you think people could make homes in this kind of region?

Our Country Was Settled Region by Region

If you will turn through the pictures and maps of this book, you will see that the natural regions helped very much to decide ways of living. The Europeans came first to the Atlantic coast and settled. There the soil and the forests, the rainfall and temperature and winds, made them live in certain ways. Map 4, pages 14 and 15, shows two natural regions on the Atlantic coast extending from New England to Georgia.

After a long time some of the people moved westward across the Appalachian Mountains. There they settled in another natural region — the garden spot of the Mississippi Valley — and made homes.

Still other people found different natural regions even farther west. Some remained and raised herds of cattle in the natural region of the high grassy plains east of the Rockies. Others found gold and copper and other metals in the huge natural region of the western mountains and plateaus. Still others went over the high mountains and settled in the natural region along the Pacific coast.

Because nearly all this settlement of North America was made by moving westward from the Atlantic toward the Pacific, we call it the "westward movement." It was one of the most exciting movements in the history of the world.

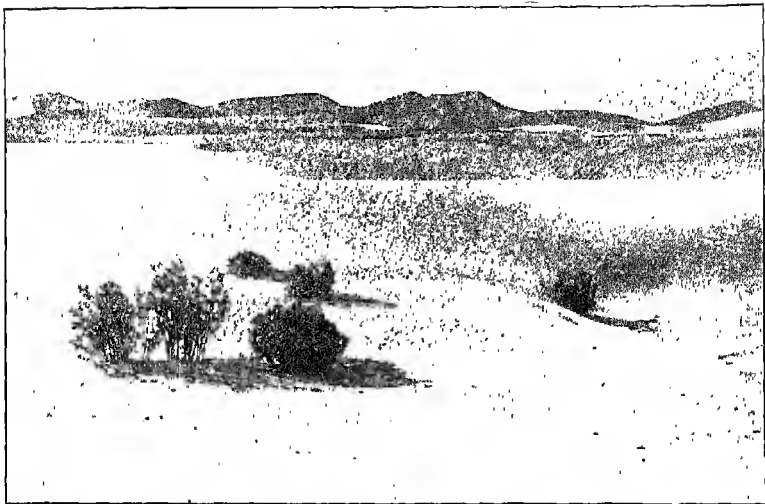


FIG. 4. The sand dunes of Death Valley, California



FIG. 5. The rocky shores of the Pacific coast

Ewing Galloway

The Building of America

But before we begin the story let us see who these people are that have made this country in America.

Books You Would Like To Read

- ALLEN, N. B. United States. Ginn and Company, Boston. A geographical and industrial reader.
- CHAMBERLAIN, J. F., and CHAMBERLAIN, A. H. North America. The Macmillan Company, New York. An excellent geographical reader which introduces the different regions of the United States.
- JORDAN, D. S., and CATHER, MRS. K. D. North America (High Lights of Geography). World Book Company, Yonkers, New York. How the continent of North America was formed; descriptions of various natural regions; many interesting facts.
- MITCHELL, MRS. L. S. North America; The Land They Live in for the Children Who Live There. The Macmillan Company, New York. Geography told through stories; with good illustrations.
- PECK, A. M., and JOHNSON, ENID. Roundabout America. Vol. I, The Old South, Southwest, and California; Vol. II, New York, New England, Middle West, and Northwest. Harper & Brothers, New York. Geography and description of parts of our country. For the best readers.

CHAPTER III

People of Many Countries Built America

LOOK AT the picture on page 29 and see this crowd of "Americans." All of them live in our country, the United States of America, and all are proud to call themselves Americans.

Very likely the parents of many of these children came from countries far away. Some may have come from Russia; others from Italy or Spain or Mexico; still others from Great Britain or Germany or Denmark. In a large group of high-school pupils like this every country may seem to be represented. Yet they are all Americans.

As we read the stories in this book we shall often ask ourselves: "Who were the people that settled the vast wilderness that is now the United States? What people had the courage to cut down the forests, cross the plains and prairies, climb up and down the mountains?"

The answer is that no one people did it. It was people from many lands, many countries, many races. Daring and restless people came from England and Scotland. In all, several million came from the British Isles.

The Dutch came from Holland and the Swedish immigrants from Sweden. Irishmen filled many boats for years and years, crossing the Atlantic from Ireland to North America. Later it was the Germans, who came by the tens of thousands, and the Danes and Norwegians, and still more Swedish people.

If you will recall the countries of Europe as you studied them in *Peoples and Countries*, you will notice that all these peoples we have named came from western and northern Europe. For nearly 300 years those who built America came mostly from northwestern Europe. The Negroes from Africa were almost the only exception.

Only a few years ago millions of people began to come from southern and eastern Europe. Today there are several million Italians, an equal number of Jews, and even more Slavs from Poland, Russia, Czechoslovakia, Yugoslavia, and other parts of eastern Europe.

From Mexico, to the south of us, have come quite a number of Mexicans, and from Asia came Chinese and Japanese. From islands in the Pacific Ocean came Filipinos and Hawaiians. From still other places came other peoples.

So we see that many, many different peoples built our country. From all over the world they came to North America. Their children and their children's children are the people we call Americans today.

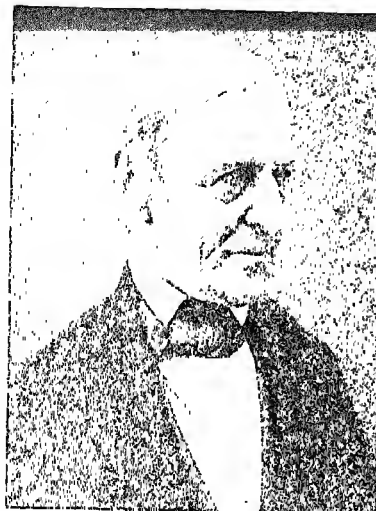


FIG. 6. Ralph Waldo Emerson



FIG. 7. Andrew Carnegie



FIG. 8. John Dewey



FIG. 9. Susan B. Anthony

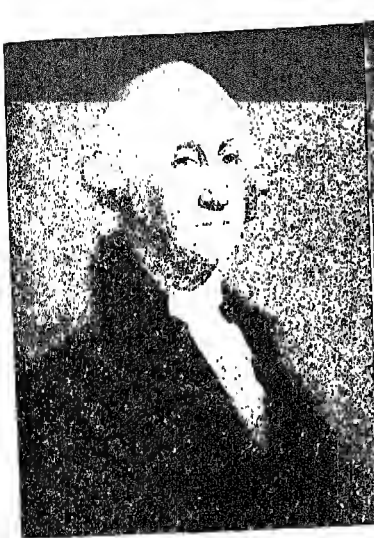


FIG. 10. George Washington



FIG. 11. Woodrow Wilson



FIG. 12. Jane Addams



FIG. 13. Oliver Wendell Holmes



FIG. 14. Charles P. Steinmetz



FIG. 15. Booker T. Washington



FIG. 16. Louis H. Sullivan



FIG. 17. Thorstein Veblen

The Building of America

The pictures of this chapter show some famous Americans. If you were skillful in the study of faces, you would see from the photographs that most of these men and women came from families belonging to the British Isles or Germany or Scandinavia. Indeed, the ancestors of most of our presidents, lawyers, scientists, writers, architects, and teachers were from northern and western Europe. But some of our finest artists, lawyers, musicians, and leaders in government today were born of parents from Italy or Poland, from Russia, or from other parts of eastern and southern Europe.

Let us remember that nearly every race and every country has sent us some fine people who have helped to make our America the country that it is today.

The story of the United States of America, then, is the story of the settlement of the natural regions of our country. To understand it we must know two things: the geography of these natural regions (land and climate and resources) and the history of the way in which they were settled.

Books You Would Like To Read

MEANS, MRS. F. Rainbow Bridge. Missionary Education Movement (Friendship Press), New York. The experiences of Japanese children who left their country to live in America.

VOLLINTINE, GRACE. The Making of America. Ginn and Company, Boston. Tells of the people who came to live in America and made it what it is today.



Pennsylvania Department of Public Instruction

FIG. 18. A high school in our country has children whose parents or grandparents come from nearly all the countries of the world. Yet the children are all "Americans"

PART II

The Westward Movement Begins: Discovering and Settling

WE have had just a glimpse of the continent of North America and the people who built our country upon it. Really to understand the story we must know more of how the different Europeans came to North America and what they found here. We must live with them in imagination as they struggled with the wilderness and built farms and villages and towns and cities across the continent. We too must make the westward movement from the Atlantic to the Pacific, living through the settlement of the natural regions. We too must see special ways of living growing in each of those natural regions.

This means that we shall read not only the "geography" stories but the "history" stories as well. We must turn our minds back to the beginning; back to the first settlement of the land. That is what this book tries to do: to show us a kind of moving picture of the building of America.

How far back shall we have to think? More than 400 years, to the time just before 1500 A.D. Then there

were no "white" men in North America or South America. As you know from *Peoples and Countries*, there were at that time in Europe four countries of white people — England and France, Spain and Portugal. Other white peoples were living in communities and small states in different parts of Europe.

In Asia there were nations of darker-skinned peoples. China and India were among the largest of these. And in Africa there were millions of black-skinned Negroes.

But in North America there were only —

What?

The stories of Chapter IV tell us.

CHAPTER IV

The Red Man's Continent

America in 1492: A Continent of Forests

ON EVERY side stretches a vast unbroken forest. Dry leaves rustle as the quick feet of a small animal pass over them. Then the song of a bird breaks the silence.

Suddenly a half-dressed man appears between the tree trunks. He glides noiselessly along the narrow path. His tall, straight body moves swiftly. He pauses for a moment in a splash of sunlight which falls upon the path. Then he passes, and in a moment is lost to sight again among the tree trunks. The forest, which was scarcely disturbed by his coming, settles down again. The only movement is the flight of a bird from tree to tree.

This was North America. The year was 1492. From the Far North, where winter lives almost the year round, to the Far South, where summer never dies, silence held most of the land. From the Atlantic to the Pacific the earth lay almost undisturbed.

Were there no men to break this silence?

There were, indeed. Along the shores of the oceans and the Great Lakes dark-skinned men had built their

homes. In the river valleys and on the open plains thin threads of smoke rose from many fires. Here and there over the broad continent little villages, even small towns, were scattered through the forests. Narrow trails ran through the woods and over the hills connecting these little settlements. These were used by friendly and unfriendly visitors alike.

Who Lived in This Silent Continent of Long Ago?

The people who built these villages and camps were copper-skinned men whom we call "Indians." Each tribe had its own name and its own language. The names of some are given on map 5, page 35, which shows where they lived. See if you can pronounce them. There were Iroquois, Algonquins, Seminoles, Creeks, Apaches, Cherokees, Pueblos, Comanches, Mohawks, and many, many others. These are only a few of the hundreds of tribes that lived on the land that is now the United States of America.

How many Indians were there? We do not know exactly. In the whole territory there were perhaps 500,000 red-skinned people.

The Indian People Were Divided into Many Tribes and Lived in Many Different Ways

Some of the tribes along the Atlantic coast, such as the Iroquois and the Creeks, lived in log houses or in bark huts with thatched roofs. In clearings in the

forest they raised their corn and beans, pumpkins and squashes. They hunted in the forest and on the plains. They fished in the oceans, in the lakes, and in the rivers.

Others — such as the Pawnees, the Illinois, the Iowas, or the Sioux — lived farther west, on the great level plains of the Mississippi Valley. These lived a wandering life, pitching their skin tepees (tents) wherever they found buffaloes or other foods.

Still others, like the Pueblos of Arizona and New Mexico, built more lasting homes of sun-baked clay among the cliffs on the high plateaus. And still others made their houses in far-off California. These houses were but shallow round holes dug in the earth, with a roof of mud and clay built above them.

But in the year 1492 the earth itself was hardly touched by these men. They did not dig deep to find coal and iron; they did not build railways through mountains. They had cut down very little of the forest. In their small clearings they had lived, generation after generation, century after century, leaving the continent much as they had found it.

Some Glimpses of Ways of Living among the Indians

How did these Indian people live? How did they make their clothes? How did they build their houses?

By 1492 each group of tribes was living in its own special ways. In each separate part of the continent

the climate, the soil, and the mountains or valleys were different. These helped to decide how the Indians built their homes, raised their food, and made their clothing.

There is not space in this book to tell about all the ways of living among all the Indian tribes. We can, however, tell you something of how a few of them lived. From these next short stories you can begin to see what helped to make their ways of living what they were.

1. How the Iroquois Indians Lived in Their "Long Houses"

On map 5, page 35, you can find the region where the Iroquois tribes lived in 1492. It is about the same region as is now covered by New York State.

Night had fallen. A cold November wind pushed against the stout walls of the long house. An old woman went to each doorway and pulled the skin curtains tightly together. She was shutting out the "Bear Walker" and other evil spirits.

This woman was a most important person in the tribe. She owned many things. And she it was who would have the right to choose a new chief should the old chief be killed in battle.

The old woman then squatted by her fire in the very center of the long house. She heaped sticks upon it. It began to burn brightly. Soon the people of the

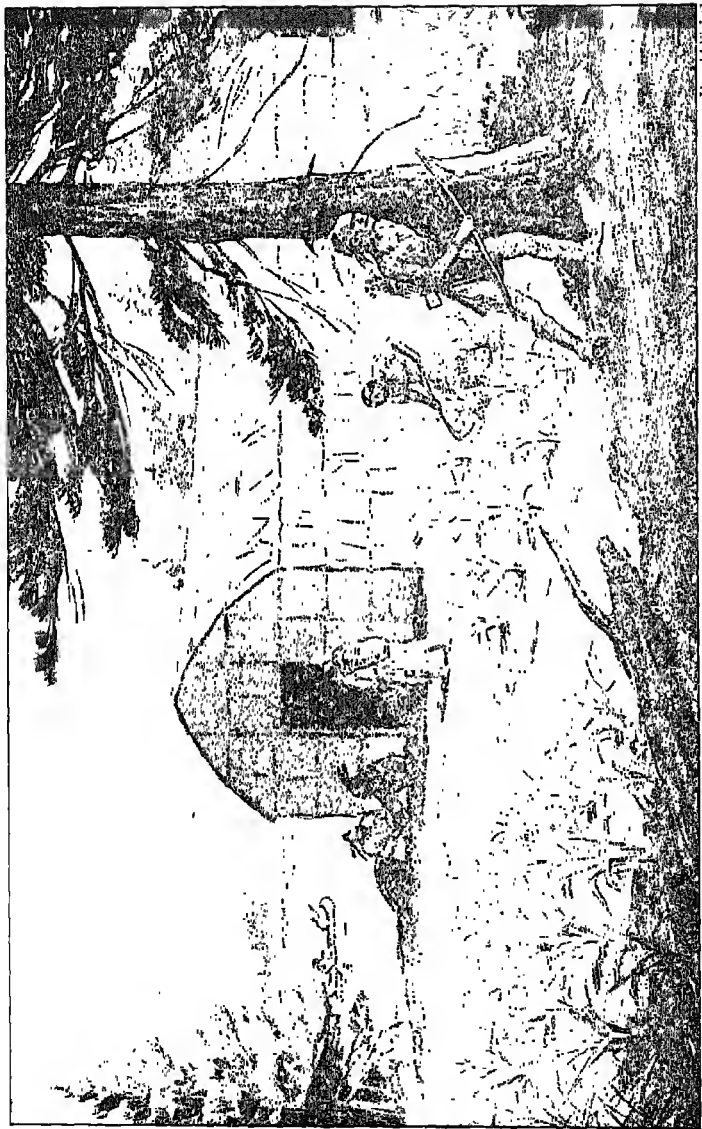
long house left their own living places, which opened from the middle hall like stalls in a stable. They gathered around the fire of the old woman.

Gradually all fires but the old woman's died. Her fire cast its shadows upon the faces of the women, who had seated themselves on one side. They were gossiping with one another. Opposite them sat the men, discussing the day's hunt. Behind them were the children.

Chief Large Feather rose to speak. He was the bravest and the strongest of the tribe. He was the great sachem (chief). He had just returned from a meeting of all the Iroquois. This had been held in the lodges (houses) of the Onondagas. The Iroquois warriors waited to hear his report. His dark eyes glanced over the faces of his warriors.

Chief Large Feather spoke for a long time. He told what each of the tribes of the Iroquois nation was doing. He spoke of the Onondagas, of the Mohawks, of the Senecas, of the others. Finally he ended his speech by saying that all was well in the long houses of the Five Nations.

After he had finished speaking the warriors and their wives went back to their own living places. As they did so a tall young boy spoke eagerly to Chief Large Feather. The boy admired Large Feather for his deeds, which were talked about in all the long



Harold S. Adams

FIG. 19. A long house of the Iroquois Indians. Do you think they were food-gatherers? Were they food-producers?

houses of the tribes. It was just such a warrior that he would wish to be.

Large Feather looked at the boy. "Truly you are becoming a man when you no longer play with children," said he.

"I want to hear again," said the boy, "how Hiawatha, the great wise man of our people, called the people of the long houses together and made them into one tribe."

So Large Feather gathered the young boys of the tribe around the fire and told again, as he had many times, of the coming of the brave chief Hiawatha in a canoe. He told of his deeds and of his wisdom. Finally he ended by telling the story of the way in which Hiawatha brought together the Five Nations into one group.

"And Hiawatha called together the people of the Five Nations who dwelt in this great valley,¹ and he said to them:

"We have met, O people of many nations, coming a great distance from your homes. We have met to arrange for the safety of all of us. Our foes from the north attack us. They will destroy us unless we unite as a common band of brothers. Let all the tribes of

¹ Little is really known of Hiawatha. Even the date when the first union of the Iroquois tribes took place is in doubt. But the union was already at least 100 years old when the first white settlements were made.

the Five Nations stand together. Thus only can our homes be safe.

"You, Onondagas, shall be keepers of the wampum. In your main town the sachems of the Five Nations shall meet. You shall choose fourteen sachems to speak for you.

"You, Mohawks, live under the shadow of the great trees whose roots sink deep into the earth and whose branches spread over a vast country. You are warlike and mighty. You shall be the second nation.

"You, Oneidas, shall be the third nation, because you give good advice.

"You, Cayugas, whose home is in the dark forest, you shall be the fourth nation, because you are such clever hunters.

"And you, Senecas, who live in the open country and have much wisdom, shall be the doorkeepers. You shall have two of your warriors as the great leaders of the Five Nations.

"So we people of the Long Houses are five great and powerful nations. We must unite, and no foe can conquer us. If we unite, the Great Spirit will smile upon us. Brothers, these are the words of Hiawatha!"

"And so the Five Nations have dwelt together in peace," continued Large Feather. "Fifty sachems have ruled over them. We are called the People of the

Long House, for not only do our people live in long houses like this one, but the tribe in which we are united together is like one great long house.

"For our five tribes dwell in a row along the rich Mohawk River valley. From the great river toward the rising sun, to the Great Lakes toward the setting sun, reaches the great long house. Thus are we one people. In times of peace we raise maize, beans, and squash in our gardens; we hunt in the forests so that our women and children may have meat. But in times of war with our northern foes our warriors spread fear through the village of the cowards. This we do that there may one day be peace among all men, that all may be People of the Long House."¹

Large Feather's story was finished. His words had taken hold upon all the children. So it was that they learned of the deeds of the great chief Hiawatha. So it was that they also learned how best to keep peace by uniting with other peoples.

2. *The Fine Indian Villages of the Southeast*

South of the Ohio River and east of the Mississippi lived many other Indian tribes. Find some of them on map 5, page 35. There were the Creeks and the Seminoles where the states of Georgia and Florida are

¹ Adapted from Thomas Donaldson's *Six Nations of New York*, Eleventh Census of the United States, Extra Census Bulletin (1892), p. 20.

now. Near the Mississippi River were the Choctaws and the Chickasaws. Farther north, near the Ohio, were the Cherokees, and there were many others.

In some ways their ways of living were like those of the Iroquois, but in one way they were very different. They had not learned to unite, to form a single great nation. Each tribe lived separately in its own kind of village.

Some of them had learned to make much better certain houses and villages than had the Mohicans and other tribes of the north. As we shall see from the next story, the Creeks especially had learned to make rather fine houses of logs and bark. Their villages had grown to be large towns. They knew how to raise many kinds of food — corn, potatoes, beans, and rice.

Let us have a brief glimpse of a Creek village as it might have been in 1492.

It was harvest time in the town of the Creeks. The little Indian boy Red Feather ran from his home to the river bank. He hurried to meet his father, whom he could see paddling in his birchbark canoe. The canoe touched the bank, and the father stepped out, holding in the air three fat squirrels. He and Red Feather started toward the town.

Soon they were walking through the streets. Red Feather did not think of the things around him, for he

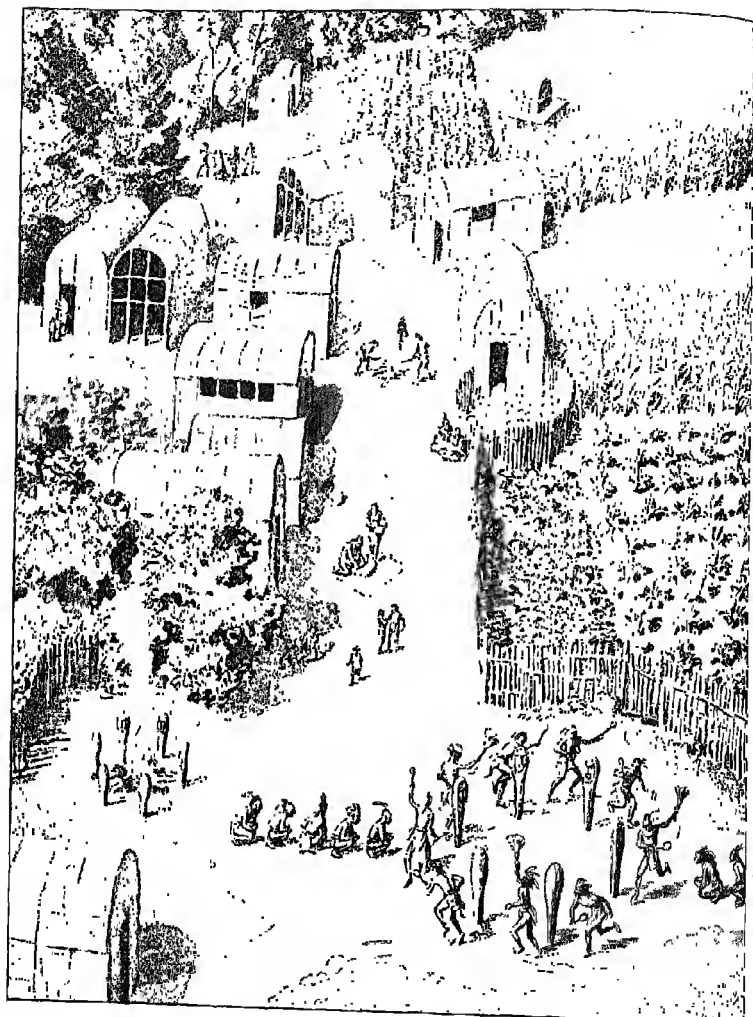


FIG. 20. As an artist imagines a Creek village looked. Notice especially the sacred fire, the Indian dance, and the cultivated fields

was used to them. The town was, however, a very unusual one. There were two divisions. One was the White Town, the Peace town, in which no blood could be shed. The other was the Red Town. That was ruled by warrior chiefs, of whom Red Feather's father was one. Blood could be shed in the Red, or War, Town.

The entire town was built around a central square. This place was sacred ground. It had been chosen before the first building was made. In the middle of the open square always burned the sacred fire. Never must this fire be allowed to go out.

At each corner of the square, facing north, east, south, and west, were the homes of the chiefs. On the highest corner was the meeting house. In the large round council room of this house the head chief lived. There the laws of the tribe were made. At the second corner lived the warrior chiefs. In the third dwelt the warriors themselves. The women, children, and strangers made their homes in the fourth. The lodges were well built, with plastered walls and with doors made of boards.

Red Feather chattered to his father about many things. He was excited, for tomorrow would begin the festival of the mighty maize (corn) god. Maize was the chief food of the tribe, and it was worshiped as the god who gave life. Red Feather remembered the day when all the warriors had turned out to plant the sacred

grain. Now, although it seemed that but a moon had passed since that day, the corn dances were to be held.

The next morning the festival began. It was to last two days. First the topsoil of the public square was cleared off by the warriors. Next the lodges were cleaned and repaired by the men and women. Then began the dances.

A new sacred fire was kindled from the old. Sparks from the new flame were carried by the women to their own fireplaces. A new year was begun.

There was much speaking by the chiefs and the warriors. The chief, Red Feather's father, made peace with his enemies; for with the new year old quarrels must be forgotten. Then the men played a game of ball. When that was ended, the warriors plunged into the river, washed off their paint, and with great dignity sat down to the feast of the maize.

That night Red Feather went home, tired but longing for the day when he too might become a warrior. He wanted to share in the ceremonies and to be able to hunt, to fight, to dance, to feast before the women and children, and to wear paint.

Do you see, then, that the Creeks knew many things? They had a settled way of living. They knew something about farming, the building of houses, and the making of clothes. They held feasts and festivals.

Were there space we might tell how the Creeks made yarn and blankets of wool, how they made fine deerskin shirts for the men and skirts for the women, how they decorated their clothing with beautiful bead patterns, how they made bowls and utensils from clay and wove baskets. We might also learn how they ruled themselves and worked together in communities. But we must go on with word pictures of other tribes.

3. *The Wandering Buffalo Hunters of the Great Central Plain*

Now we turn to still another region of the continent — the vast central plain of the Mississippi Valley. Find that region on map 4, pages 14 and 15.

On those great plains one could travel many, many days without seeing villages or towns, almost without seeing trees. We do not mean that there were no Indians on these treeless plains. Map 5, page 35, shows many tribes, such as the Illinois, the Missouris, the Iowas, the Arkansas, the Kansas, the Sioux, and others. But these tribes lived not in settled villages and towns, but scattered about. Although a few of them raised some food, such as maize, most of them were food-gatherers. Their lives depended chiefly upon the buffalo, that magnificent animal of the plains. The buffalo was their most important food. He furnished

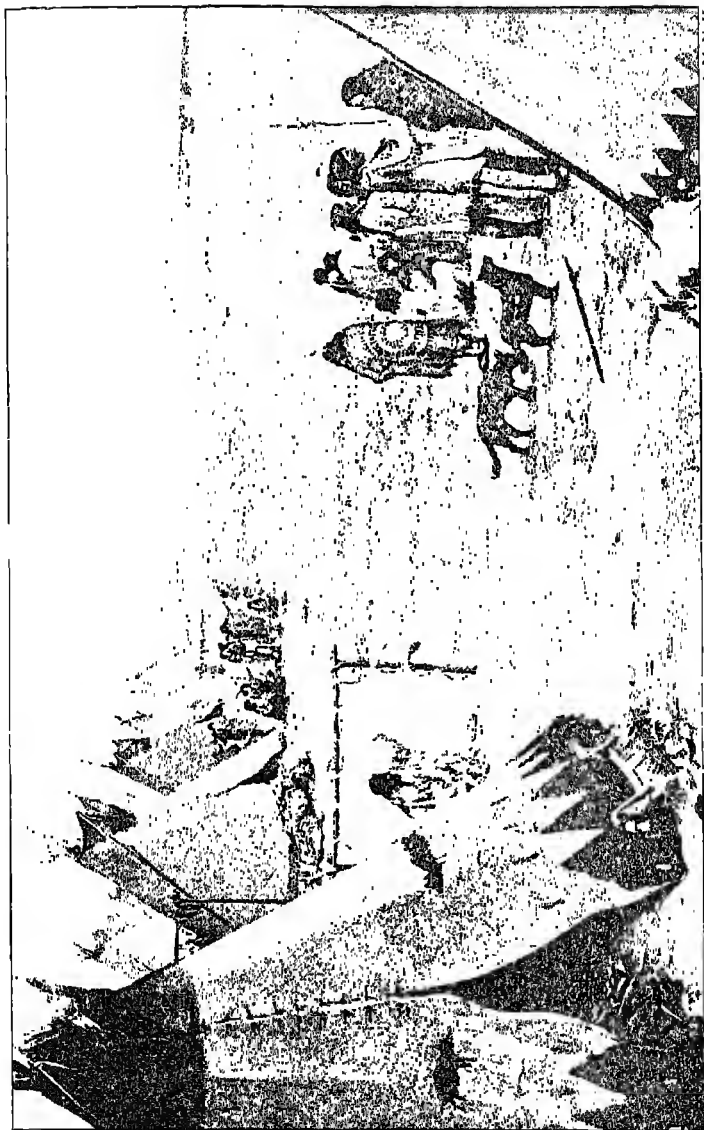
hides for their tepees and for their clothing and their shoes. Dances were named in his honor. The very life of these plains Indians centered about the buffalo. He was as sacred to them as maize was sacred to the Creeks.

Here is a short story of how one little plains-Indian girl lived with her people.

For many moons a tribe of Sioux had been following buffalo herds toward the setting sun. Now the end of the great plains was near. Soon they would reach the mountains. During the long wandering no trees had cast their forest shade. Instead, level grassy lands stretched so far as to tire the eye — north, east, south, and west. Herds of shaggy buffaloes moved restlessly before them from old grassland to new grassland. And always at the heels of the herd moved the tribe.

The sun was slipping down to the rim of the plain as the Sioux at last found a small stream. Here, at its very edge, they stopped to pitch camp. Their weary dogs stood with tongues hanging. All through the long day's march each dog had dragged two heavy long poles fastened to his back. On these poles were strapped the bundles which held the belongings of the Indian family.

Soon the women began to untie the packs. Prairie Flower, a little girl of the tribe, quickly opened one



A. M. N. H.

FIG. 21. The Sioux and other plains Indians led a more wandering life than the Iroquois or the Creeks. Were they food-producers?

and unrolled the buffalo hide used for the tepee. Her mother began to set up the poles of the tepee. First she carefully set the main pole so that the entrance to the tepee would face toward the east. Then she arranged more poles on the ground in a circle and bound the tops of them together.

Over the poles Prairie Flower and her mother stretched the hide. It was a beautiful hide, painted with stars at the top and bottom and with a row of animals halfway between. Prairie Flower remembered the time when her father had painted the skin for the tepee. He had told her a story about the stars and the animals that lived near the river. The furry otter was one of these. He was her father's powerful "medicine" that protected him in the hunt and at war.

Prairie Flower slipped the wooden pins in place, fastening the folds of the tepee. Now her home was ready for furnishing. They must leave a place for air, however. Prairie Flower watched while her mother fastened back two small flaps at the top of the tepee, so that the air could enter and the smoke could escape.

Together Prairie Flower and her mother set up the altar behind the fire. The mother lighted the tobacco dust, which they burned to keep their new home pure. On the altar she placed the war bundle of the father of the family. This held many things with the aid of which he talked with the spirits.

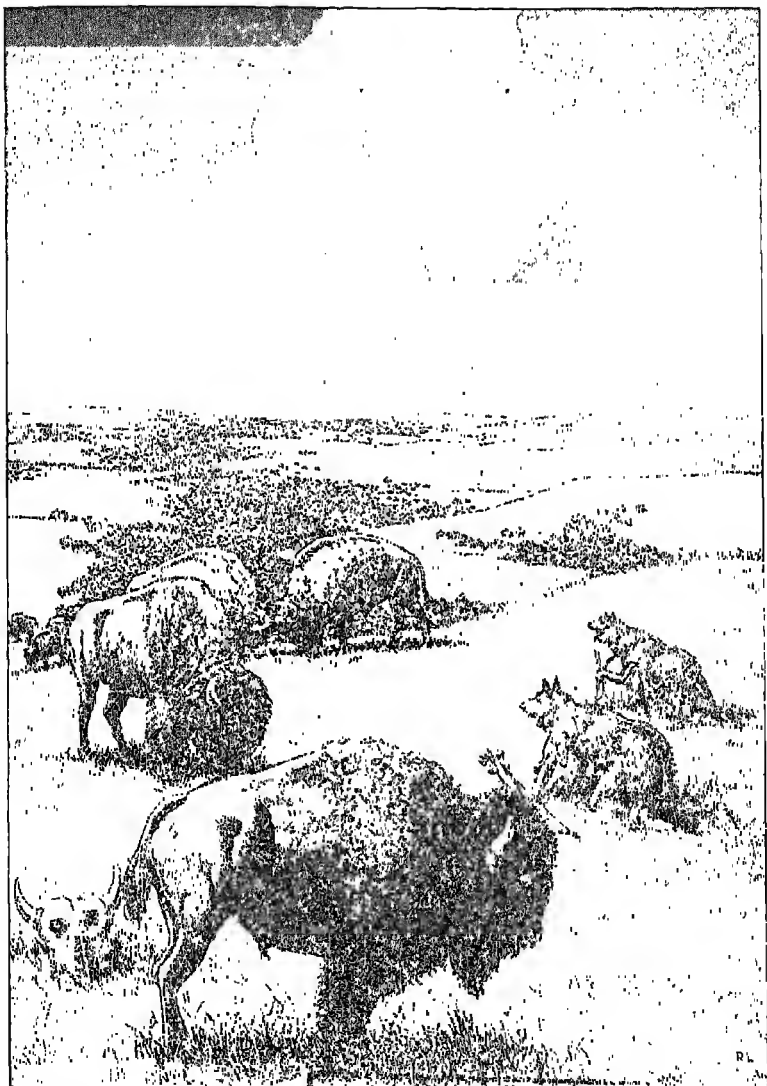


FIG. 22. Indians hunting buffalo. Do you think this looks courage?

Then the father's newest wife lighted the flame in the stone fireplace. It was her duty to heat the stones which would cook the buffalo meat for supper. Another wife gathered wood. An older daughter took care of the little brother, who was crying. He had been strapped all day to a board hung on his mother's back and was tired and very hungry.

In the tribe there were many families who lived like that of Prairie Flower. There were many boys and girls and fathers and mothers. Together these plains Indians moved from place to place, depending on the buffalo for food, clothing, and shelter. Theirs was a very different life from that of the eastern and southern tribes.

4. The California Indians and Other Tribes Were Poor Slaves of Nature

Not all the Indian tribes were as advanced in ways of living as the Creeks or the Iroquois, or even as the buffalo hunters of the plains. Some of them were poor slaves of nature who could barely get a living from the earth.

Such were the Indians who lived in the land that is now the sunny, fruit-growing state of California. These Indians who lived there in 1492 did not know how to make the land blossom as the white man did later.

They did not even know how to hunt the deer or the bear as did their neighbors of the central plains. While other tribes were learning new ways of living from their neighbors these California Indians remained quite poor. Here is a glimpse of their ways of living.

An Indian woman and her young son crawled from their thatch hut. On her back the woman carried a basket bound by a strap across her forehead. The child clung close to his mother's side, for he was afraid of the evil spirits which he believed hid in the forests. Many a night as the wind made strange sounds at the door, his grandmother had told him about them. They waited, she said, behind every tree ready to seize and eat fat young children.

Soon they reached a grove of oaks. The mother and son began to gather acorns and to put them into the basket.

"We'll not starve this year when cold days come," said the woman. "There are many acorns under the oak trees this year."

The little boy was glad. He thought of the cold days of last winter. Many times there were no fish, no berries, no acorn bread, to be had. Father could not find so much as a little white rabbit to fill the boy's empty stomach. How often he had cried himself to sleep with hunger!

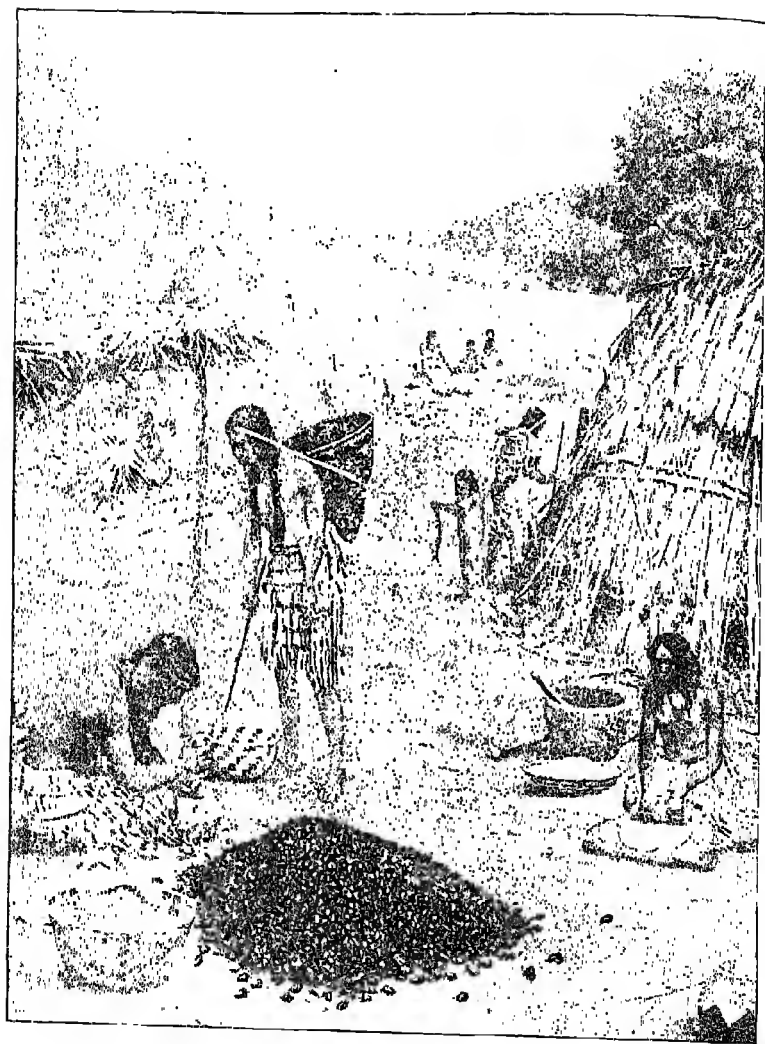


FIG. 23. Were the ways of living of the California Indians as advanced as those of the others? Were their houses as well built? Did they know how to cultivate the land?

The woman was glad too. For many winters she had been frightened lest her family might starve. Every winter there were many deaths among the tribe; only the strongest lived on to gather acorns for another year.

5. The Pueblo Indians of the Southwest Deserts

A journey of several days from the California tribes would take the traveler of 1492 into the homes of quite different tribes. These were the Pueblos, who lived in the southwest desert lands. Here the Indians had learned to build homes that would last. Some of them lived in villages among the cliffs; others lived on the high tablelands which rose from the desert; still others lived in the valley of the Colorado River (see map 5, page 35). Their settlements spread over a large area in what is now Arizona and New Mexico.

Let us look into a Pueblo settlement perched high on a plateau called a mesa. There are two entrances to the village from the plain. One is a long upward slope. Another is a steep, secret trail. Both are guarded by day and night to keep off enemies who might attack the town.

It was noon on an August day. The desert sand scorched the feet of the little group of Indians returning to their homes. Ahead they could see the broad trail winding upward to their village.

Light of Dawn, the little girl among them, looked up at her house. She tried to imagine how small she must seem to the guards at the top of the trail. Many times before, when she was above, she had looked down to see tiny figures; they seemed to crawl like ants across the glaring sand. Now the trail went steeply upward. After a hard climb the group reached the top.

The gardens of the village lay ahead. The cornstalks were standing in the dry fields, for they had been gathered. No longer could water be spared for the fields. The stone tank stood ready to catch any stray drop of water that might possibly fall from the bright blue sky.

Beyond the gardens stood the Pueblo village. It rose in four terraces on three sides of an open court. There were no doors or windows in the dwellings of the first story. Light of Dawn easily climbed the high ladder which led to the first terrace. There she greeted the neighbors who gathered about the returning party. They were eager for news of the village which Light of Dawn had just visited.

Everyone was on the terrace that August day. All were very busy, too, for tomorrow was the day of the corn festival. They would pray to the great Rain Spirit to send life-giving rain to the desert, so that there might be maize.

On the terrace ears of corn were drying in the sunlight, while in the shade bunches of dried meat and

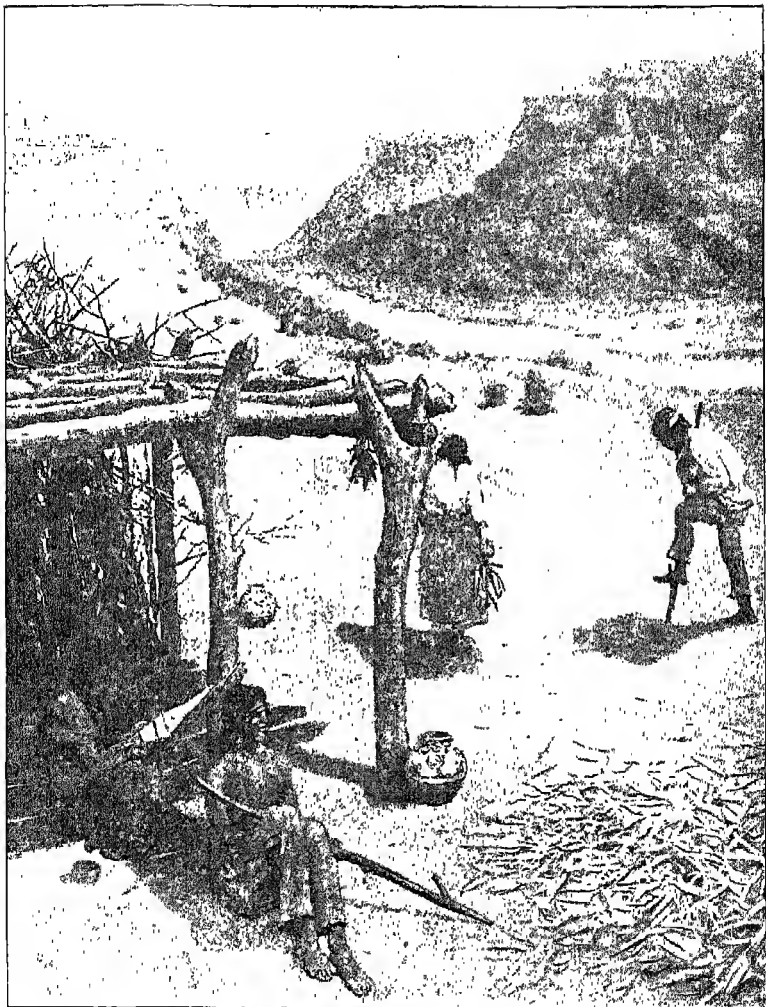


FIG. 24. The Pueblo Indians depended upon corn more than upon any other food. Beyond the cornfield is one of their pueblos. Compare their houses (see figure 25 also) with those shown in figures 19 to 23

green and red peppers hung from poles. Two of Light of Dawn's young friends chatted in a shady corner as they ground the corn into meal on flat stones. Like her, they wore their hair in two round puffs, one over each ear, to show that they were not yet married. In a corner a young man sat painting a piece of pottery in beautiful colored designs.

Light of Dawn told the story of her trip. Then she climbed to the second terrace. This was the roof of her home. There was an opening in the roof. Through it she went down a ladder into the cool half-darkness.

In the corner at the fireplace Light of Dawn's older sister, who was married and who wore her hair in two long braids, was baking corn for the festival. She spread a thin layer of corn meal and water on hot stones. In a moment it was baked. Then she lifted it off with her hand and spread another layer.

One of Light of Dawn's brothers was boring holes in turquoises, small blue stones, to make beads for his wife to wear. Another was weaving a bright cotton cloth. It was the wedding garment in which he was to be married after the festival.

On the feast day the sun rose bright and the sky was a brilliant blue. There was a great stir in the village. Light of Dawn chose a place on the balcony from which to watch the ceremonies.

Now the drums beat. The crowd became quiet and solemn as two lines of dancers appeared, moving in a slow, even step. The bodies of the men were painted red, yellow, or blue. They wore turquoise necklaces, and small branches of cedar were tucked in beneath their belts. The women wore green wooden headdresses, which stood for clouds and lightning. The steps of the dancers were slow, even, all in perfect time. At the head of the dancers was the chorus. To the beat of the drum they chanted:

Now come rain! Now come rain!
Fall upon the mountain; sink into the ground,
By and by the springs are made
Deep beneath the hills,
There they hide, and thence they come,
Out into the light; down into the stream.

Light of Dawn sat straight and still. The dancing went on for hours. After a while she grew tired, and her interest in the dance and the song was broken. She wanted to go and play. The sun moved higher and higher in the sky; then it sank. Still the drums beat. Still the dancing continued. Still the chorus rose:

Look to the hills! Look to the hills!
The clouds are hanging there;
They will not go away;
But look, look again. In time they will come to us
And spread over all the pueblo.

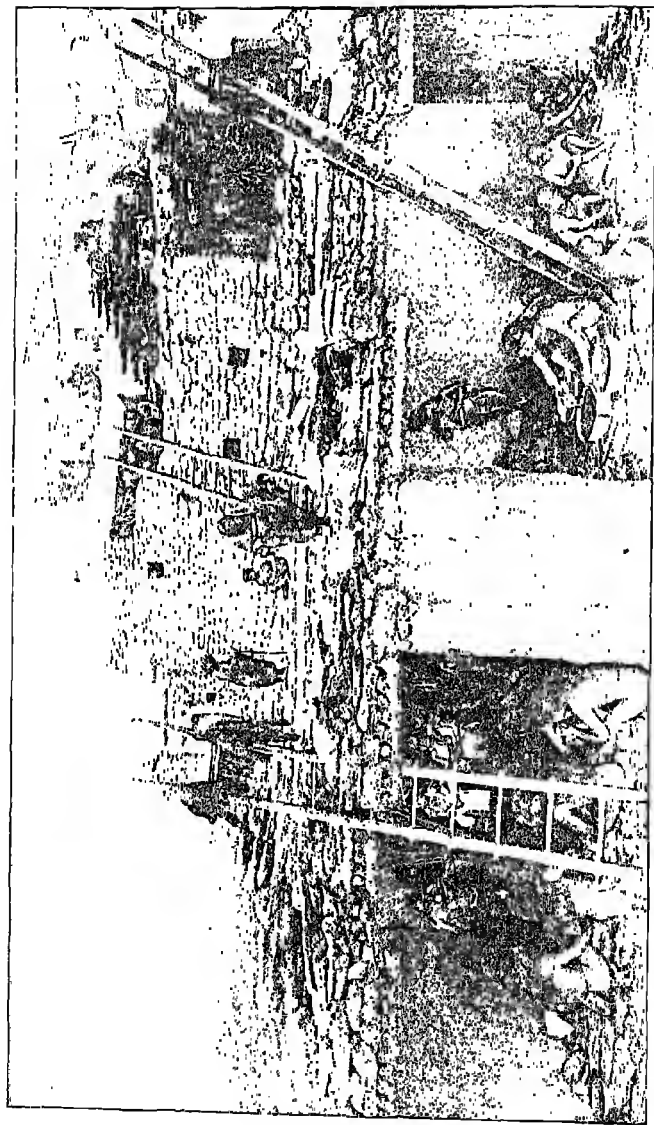


FIG. 25. What does this picture tell you about life in a Pueblo village? The front of the lower story has been cut away to let you see the rooms. Compare these ways of living with those of the Iroquois, the Creeks, the Sioux, and the California Indians.

Such Was Indian Life in North America in 1492

These little stories show us how in 1492 this great territory, now called the United States, sheltered but a few hundred thousand Indian people. Some of them lived in towns and villages, cultivating the soil. Others lived the life of hunters on the great central plains. In the southwest desert the tribes lived in permanent homes and knew how to use metal. Nearly all the tribes had learned to make cloth, garments, and utensils. All had a great love for ornament; they decorated their clothing and pottery.

From Where Did These Indian People Come?*What Was Their "History"?*

How did it happen that these reddish-skinned people were living here in 1492? Where did they come from?

Many people today wish they could know the answers to these questions, but no one knows. Even the Indians themselves did not know. Their forefathers did not write down what happened. They did not have "histories" of their people as did the Chinese and the Egyptians, the Greeks and the Romans, and other ancient peoples.

Their storytellers told tales of how their ancestors

¹ From the Milwaukee Public Museum.

came from lands to the west of the setting sun (Asia). It happened, of course, too long ago for them or even their great-grandparents to remember. They could only guess and make up stories about it. The old people told these stories to their children sitting around the fires in the evenings.

Even our best students of history do not know. They have many ideas. Some of them today think that the ancestors of these Indians did come from Asia long, long ago. Others think that the Indians had always lived in America. But all we can truthfully say is, we do not know.

The Geography of North America Tells Us Something about How the Indians Lived

We do not need to depend entirely upon history, however. The climate, the soil, the mountains and valleys, the minerals in the ground, all helped to decide how the Indians lived.

Look at map 1, page 5. Notice that the region now covered by Canada and Alaska is located partly in the arctic zone and partly in the northern part of the north temperate zone. In this region winters were long and summers were short. Snow covered the land for many months of the year. Buffaloes and deer and other animals were scarce. So not many Indians lived in this region.

A few did succeed in living even in the arctic region, as you know from the story of the Copper Eskimos in *Nature Peoples*. Through many thousands of years the very strongest among these people continued to live on in spite of the severe climate.

In the region now covered by the United States the climate was not so cold. In the northern part, that is, north of 40° north latitude, the summers were fairly long. Some rain fell over most of this region from the Pacific to the Atlantic nearly every month of the year.

It is true that from November to March the temperature fell below freezing and crops could not be raised. But in April the sun would warm the earth, and the temperature would rise above freezing. The rain would come with the "westerly" winds and make the ground moist. Then the Indians could raise their crops. In July and August they would have their harvest, just as our farmers do now.

Farther south in the great central plain there were vast stretches of land covered with rich grasses. Buffaloes, deer, and other wild animals lived in great herds all over these plains. Snow covered the ground only a small part of each year, and the hunting season was long.

Geography helps to tell us even more about the way these Indians lived. The Iroquois and the Creeks lived in the forest, so they built their houses of wood.

On the central plains the Indians had little wood for building. But they did have buffaloes. So they lived in tents made of the hide of the buffalo to protect them from the rain and the cold and the snow.

In the desert of the southland, where there was little vegetation and few trees, the Indians found another way to build houses. They baked bricks made of clay and used them both for houses and for the walls around the village.

So we see that the geography of the land explains much about why the Indians lived the way they did. It explains much about their houses and about their crops, their clothing, and their ways of living.

On an October Morning in 1492 Something Happened Which Was To Change the Whole Continent

Now for a glimpse of one of the most exciting events of all history. Imagine that it is a sunny morning on October 12, 1492. We are in one of the islands now known as the West Indies, lying in the Atlantic Ocean to the east of North America.

The sun rises over the blue waters. The waves sparkle to the far horizon.

Three strong young Indians run along the beach, their tall bodies moving easily and gracefully. They are happy in the clear air of the morning. They sing a song.

Suddenly one of them stops and points toward the east. The others follow his gaze. . . . Those three white spots far out on the ocean! What can they be? Birds? Surely birds were never so large as that. Are they canoes from the neighboring islands? But canoes do not come from the great waters toward the rising sun.

The young men watch . . . the white spots grow larger. Finally they seem like huge canoes, yet they are not canoes. Above them stretches something white. Are these strange things the wings of birds?

Still closer they come. They *are* canoes, and men are moving about upon them. The young men look at each other, frightened. Can these be anything but evil spirits come down to visit men?

Still the white objects draw nearer. Now they are so near that the young Indians can see plainly. They are boats! In the largest boat there is a spot of red color.

The young Indians turn and run at top speed toward their village.

Perhaps you have guessed by this time that the three boats were the ships of the daring Italian sailor Christopher Columbus. On the deck of his ship he stood, wearing a red cloak around his shoulders. He called to the young men as they raced up the beach to the village.

Books You Would Like To Read

- AUSTIN, MRS. M. *The Basket Woman and Other Stories*. Houghton Mifflin Company, Boston. Stories written from the myths of the California Indians.
- BESTON, H. B. *The Sons of Kai*. The Macmillan Company, New York. A story of the Navajo Indians.
- DEARBORN, F. R. *How the Indians Lived*. Ginn and Company, Boston. Simply written facts about Indian life.
- DEMING, MRS. T. *Red People of the Wooded Country*. Laidlaw Brothers, New York. Life in some of the Indian tribes.
- FREY, NINA A. *Children of the River* (one of Our Changing World Series). Thomas Nelson & Sons, New York. The daily life of the Indians who lived on the banks of the Hudson River.
- HARRINGTON, MRS. I. L. *Komoki of the Cliffs*. School edition. Charles Scribner's Sons, New York. A little Hopi Indian boy's life in his home on the high cliffs of Arizona.
- MOON, MRS. G. P., and MOON, CARL. *The Book of Nah-Wee*. Doubleday, Doran and Company, Inc., Garden City, New York. Everyday life in a pueblo.
- MOON, MRS. G. P. *Chi-Wee*. Doubleday, Doran and Company, Inc., Garden City, New York. Pueblo Indian life shown by the story of a little girl.
- MOON, MRS. G. P. *Chi-Wee and Loki of the Desert*. Doubleday, Doran and Company, Inc., Garden City, New York. The little Indian girl has more adventures.
- PARKER, A. C. *Indian How Book*. Doubleday, Doran and Company, Inc., Garden City, New York. The ways of living of the American Indians. For the best readers.
- STARR, FREDERICK. *American Indians*. D. C. Heath and Company, Boston. About different tribes and their ways of living.

CHAPTER V

A European Discovers a New Continent

The Story of Christopher Columbus, an Italian Explorer

TO UNDERSTAND how the three white ships reached the islands off the North American coast we must go back many years before that October morning in 1492. We must go to the Italian city of Genoa, a city on the shore of the blue Mediterranean Sea. A great city it was in those days in which the boy Cristoforo, or Christopher, as he is known to us, was one of the hundreds of other little boys playing in the narrow crooked streets and on the docks in the harbor.

It was planned that this little boy was to be a help to his father in the wool-weaving business. So while he was young he was put to learning that trade.

But Christopher, playing with the other boys of Genoa about the wharves, did not like all those plans of his father. The harbor was a very exciting place; and every day Christopher went there to talk with the sailors, who told him of faraway lands that were full of adventure.

The ships and their men captured the boy's imagination. Here were galleys filled with sweating captives

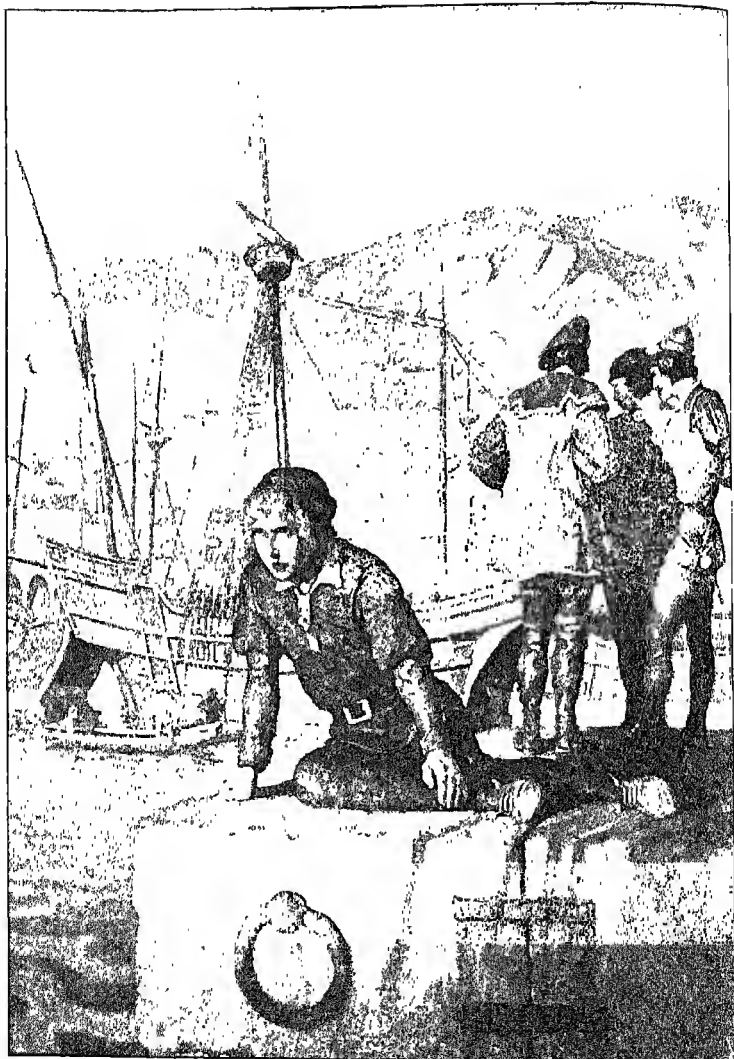


FIG. 26. The boy Columbus, sitting on the docks at Genoa, dreams of lands far away

whose lives were spent in pulling at heavy oars. There were Spanish caravels, — clumsy, roundish boats without decks, — with their dark-bearded, fierce-looking sailors. Light-haired Englishmen walked beside dark-haired Greeks in the streets, and East Indian sailors from Madras and Bombay rubbed elbows with strong Portuguese.

Christopher, lying on the heaped-up bags of foreign goods, fell to thinking about the great world outside Genoa. He was told that the bales of cotton were from Egypt, the tin and lead from England, the spices from the Indies, and the silk from Cathay (China).

So the boy began to think much about the geography of the world. He wondered where those countries were from which the strange treasures came. We can imagine that more and more he neglected his father's wool business and read whatever books he could get when he was not listening to the sailors' tales.

At last Christopher could stay on land no longer. At the age of fourteen he left Genoa and went to sea. Far and wide he traveled, sailing south along the coast of Africa and north perhaps as far as Iceland. There he heard stories of early voyages by daring Northmen to new lands across the western seas. These stories were to play a great part in Columbus's life.

Later the young man married and went to live for some years in Portugal. There he learned much about

the world, especially about how to navigate ships. The Portuguese were good sailors and daring explorers. Under their leader, Prince Henry, called "the Navigator," they were learning to use maps and charts and to guide ships by the compass. So Columbus studied maps of the world, and at one time made maps for a living. He read books on geography. Among them, no doubt, was one about Marco Polo's travels to the East.

At the same time Columbus was also thinking about some new ideas. He was not the first to have them, but surely there was no man in those days who believed in them so much. These were the ideas:

First, that the Atlantic stretched to the *west* far beyond where men knew.

Second, that one knew from books of travel that *east* of China lay a great ocean.

Third, that the wise men of early times, as well as of his own times, had agreed that the earth is like a ball. This Columbus had come to believe, although many sailors and other people without education thought the earth was flat.

Fourth, and this was the most important idea, that since the earth was round, one could go around it. So, by sailing *west*, one could at last reach the *East*, which people called Cathay. The very same Atlantic Ocean which touched Portugal on the west must also touch the shores of Cathay on the east.

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Study your globe. Imagine that you are in Palos, Spain, looking west over the Atlantic. Turn the globe and find China. Do you see that by sailing to the west across the Atlantic you could come to China — if there were no land in the way to stop you? So thought Columbus. But, of course, the globes and maps of his day did not show what ours do today.

The more Columbus thought of these ideas, the more he was sure about them. What, then, if he, Christopher Columbus, should sail westward and so find his way to the riches of Cathay and India? What man could be so rich and powerful and famous as he? But he was poor. He needed money — much money — to buy ships, to buy ships' supplies, and to hire men for a voyage of many months.

So Columbus went from city to city, from one rich man to another, telling of his idea and asking for money with which to sail across the seas. "The Prophet of the New Earth," as he has been called, spent years trying to make his boyhood dreams come true. But no one would help him.

The Spanish Queen Helps Columbus

On a cool autumn evening Columbus and his small son, Diego, tired out with tramping the roads of Spain, come to the door of a monastery just outside the town of Palos. Columbus rings the bell and asks for a little

bread and water and a place to sleep. While he is standing there the priest of the monastery comes to see who is at the door and begins to ask the stranger some questions. After a moment he invites him in, gives him food, and they talk until late in the night. Of course they talk about Columbus's ideas and about the riches of Cathay, which could be found if one could only sail to the west.

Luck is with Columbus at last. The priest knows Queen Isabella of Spain. He writes a letter. He goes himself to the court of the queen to explain Columbus's ideas.

After a few days there comes a letter:

"Our Lord has listened to the prayers of his servant. The wise and good Isabella . . . listened to the words of this poor monk. All has turned out well. Start at once, for the queen waits for you."

We must make the long story short. It is enough to say that Isabella, queen of Spain, decided to help the dreamer in his plans. She too needed gold to carry on her work of making Spain a great and powerful nation. She would be only too glad if a new route to the East could be found. Although she was not so sure as Columbus that he would be able to find it, she was willing to let him try.



FIG. 27. King Ferdinand and Queen Isabella of Spain hear from Columbus about a new way to the East

Columbus's First Trip in Search of the Treasures of the Indies

More years passed. There was one delay after another. Many times Columbus was discouraged. But at last all was ready.

At eight o'clock in the morning of August 3, 1492, three little ships slipped out of the harbor of Palos. Small ships they were to dare to sail that strange ocean. The largest, the *Santa Maria*, was the flagship of Columbus. The other two—the *Pinta* and the *Niña*—were tiny caravels; they did not even have decks. Travelers today would tremble with fear at the mere thought of setting sail on the Atlantic in one of those small ships.

But the "Admiral," as the men called Columbus, knew neither doubt nor fear.

For more than two months the little group of sailors kept on their way into the unknown western seas. Day after day, week after week, they looked in vain for land. Even the bravest sailors began to lose their courage. Farther and farther behind them was their own land; farther and farther were they from help. Finally their food was nearly gone. No wonder the sailors were afraid. But Columbus kept up his courage. He must be right. He would go on, even if the men did demand to go back.



Fortunio Matania

FIG. 28. Columbus is giving thanks as he steps on the land of the new world he discovered. What island was it?

Time after time the men thought they had reached land ; time after time they were disappointed. Then, on October 12, 1492, success! There was land at last! They had found the East by sailing west! Columbus was right!

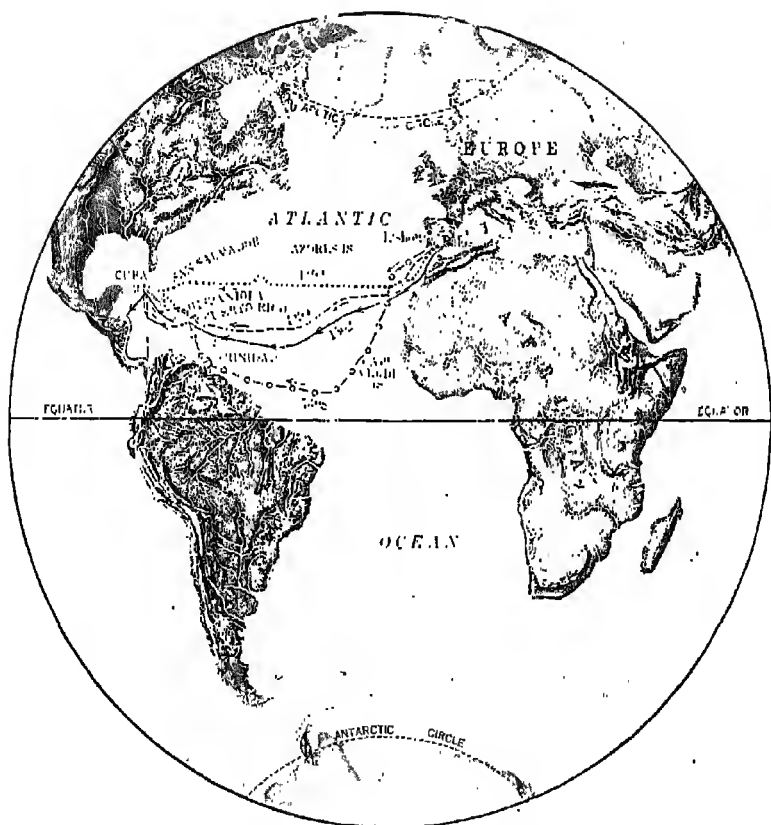
Columbus went up to the bridge and looked eagerly as the boat came near to the shore. What was that moving on the beach? Human beings? Yes, three men. The boats come closer to land. What a strange kind of men these are — dark-skinned, more like the Africans, not like the Chinese! Can these be the people of the Indies?

Then Columbus remembered that the people of Cathay had darker skins than the people of Europe. But as he studied his maps he decided that this land was one of the small groups of islands off the coast of the Indies. He called the dark-skinned men Indios, that is, men of the Indies.

But the great navigator was mistaken. He believed that the world was smaller than it really is. On his maps Asia looked much larger than it is. So, although he did not know it, he was still more than 8000 miles from Cathay.

What Had Columbus Really Discovered?

We know now that what Columbus had found was a group of small islands off the coast of North America. Look at map 6, page 77. Notice the larger islands



MAP 6. The lines marked on the Atlantic Ocean show where Columbus went on his four voyages to the New World

of this group, Cuba, Hispaniola, and Puerto Rico. When Columbus went back to Europe, he spoke of this group as "the Indies." Soon Europeans began to call it that, and since that time the islands have been called the West Indies. From Columbus's time too the early people of the Americas have been called Indians.

Columbus never knew what lands he had reached. Between 1492 and 1502 he sailed back and forth across the Atlantic four times. Along the coast of Central America and the northern coast of South America he went. But finally he returned to Europe, and died in 1506 without learning of the New World, which was really his discovery.

More Europeans Came to the Red Man's Continent

The news of Columbus's exciting voyages to the west spread from port to port, from country to country in Europe. Other Spanish sailors heard about it; Portuguese sailors heard about it; ship captains of France and of England learned of it. From city to city, from town to town, even into the little villages of the Old World, went the news.

The news was of gold and other riches, of strange dark-skinned people, and of a vast land which lay on the other side of the ocean all ready for the taking. As the stories were told by one person to another they

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grew bigger and bigger. Soon many people in Europe began to dream of "getting rich quick"! Especially were the kings and the nobles and the merchants of the cities eager to get the riches of the newly discovered lands.

Soon each of the leading countries — Spain, Portugal, France, and England — was sending ship captains across the Atlantic Ocean to explore the new continent.

How the New Land Came To Be Called "America"

Does it not seem strange that people did not name these new lands after Columbus, the man who had found them? Instead of calling them "Columbia" or some such name, they named them "America." How do you suppose that happened? There was another Italian sea captain, Americus Vesputius, who lived at the same time as Columbus. Americus Vesputius wrote a letter in 1503 in which he said that Columbus had not discovered the Indies at all and that he himself had discovered a new continent. He said that he had made three trips across the Atlantic and that he had sailed all the way round the new continent into the Pacific Ocean.

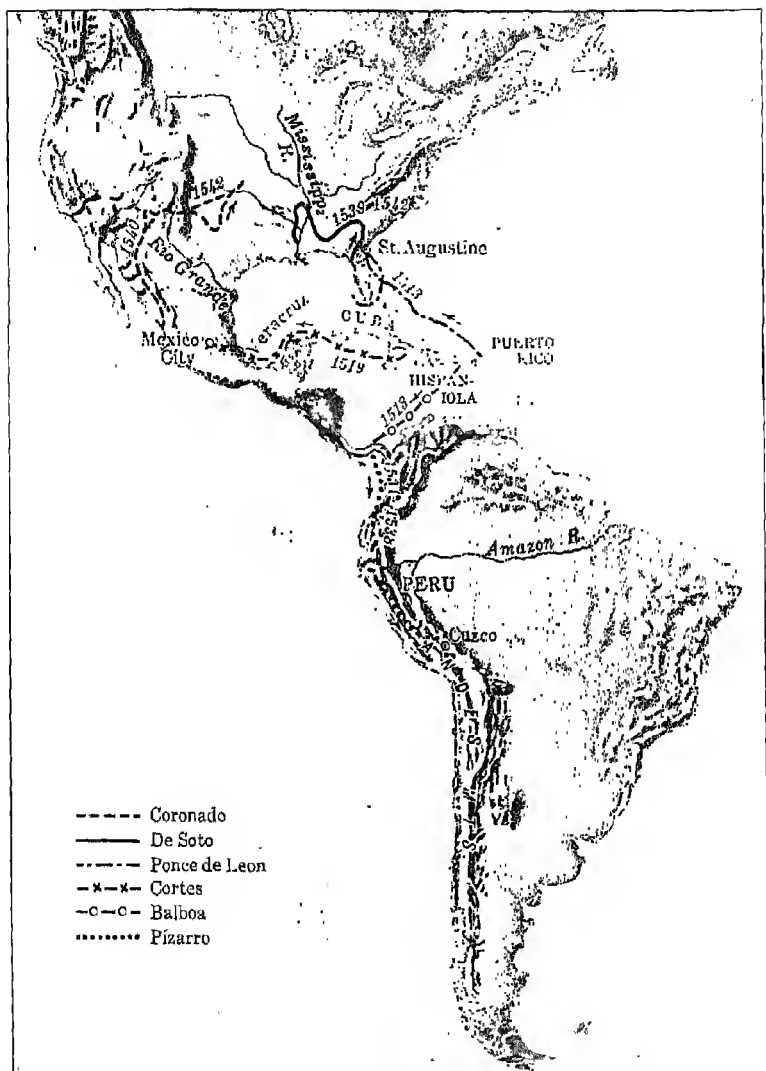
Americus's letter was printed and sent to many countries of Europe. As more and more ships went back and forth from the New World, people began to think that a name should be given to it. One man who was

writing a geography suggested that it should be called America, because, he said, Americus Vesputius was the real discoverer. A few people thought this was a good idea and began to refer to the new continent as America. Slowly others also used the name. As time went on, most Europeans came to speak of the new land as America.

Many scientists today think that Americus Vesputius did not explore the coasts of America as he said he had. But whether he did or not, the two continents were named for him rather than for Christopher Columbus, who discovered the New World.

We Have Already Learned How the Spaniards and the Portuguese Explored and Settled Latin America

In the two books called *Peoples and Countries* and *Communities of Men* we learned how the explorers of Spain and Portugal discovered and conquered the "Indians" who lived in the southern part of the new land. Ship after ship went across the Atlantic from Spain in the search for gold. During the first 40 years of the 1500's no less than six explorers from Spain landed in the islands of the West Indies and on the mainland of North America and South America. Map 7, page 81, shows who they were and where they went. If you did not read the stories, we suggest that you get the books and read them now.



MAP 7. Where the Spanish explorers went

In this book we are interested to learn how that part of America called the United States was settled by the white men of Europe. Some stories from that history you have already read in *Communities of Men*. You remember, for example, how Henry Hudson discovered the wonderful harbor where New York City now stands, and how other explorers sailed along the coast of North America. In those early years the French also came, sailing up the St. Lawrence River and exploring through the forests and plains until they came to the Mississippi River. Then on they traveled, down the Mississippi to join other French settlers at its mouth. Here the settlement of New Orleans slowly grew at the delta where the Mississippi pushes its way into the Gulf of Mexico.

But it was the daring sailors from another country who discovered and claimed our part of the Americas. These were the English. Somewhat later these English sailors were followed by thousands of brave English settlers who came and made their homes in the Indians' wilderness. For though Spain and Portugal settled "Latin" America, the land south of the Rio Grande, it was England that settled most of the land north of it.

To understand, then, how our part of America was built we must read the stories of England's explorers and settlers.

England's Sea Captains Were Not Idle

Shortly after Columbus's return to Spain the streets of London were ringing with the praise of the great man who had found "the East" by sailing west. English navigators were soon filled with the desire to find the way to the Indies.

John Cabot, an Italian sea captain in the employ of the English king, Henry VII, was one of these eager navigators. Perhaps he also could find the way to the Indies. But he would sail, not south, as Columbus had gone, but north and west. If he could succeed, what honor could he not bring to England? He could even race with Spain, carrying the treasures of the East to all the world. He would have a way which other nations could not use unless England gave them the right to do so.

Cabot went to King Henry with his plan. Four years passed. Finally, in 1496, a meeting of the court was held. After the meeting was over, an interesting scene took place. The king had gone, and his nobles were talking together about the happenings of the day.

Cabot stood a little to one side looking at a letter which the king himself had given him. Could it be true? Here in his hand he held what he desired most in the world — permission from the English king to explore new land. The letter said that he, "citizen" of

Venice, and his three sons (Lewis, Sebastian, and Santius) were to have "full and free right to sail to all parts, countries and seas of the east, of the west, and of the north . . . to seek out, discover, and find . . . isles, countries, regions. . . ."

All that remained to do was to find the ships and the maps. So on to Bristol, that great city of sailors, where he himself had lived, he went. Plans were soon made, and in the spring of 1497 John Cabot and his son Sebastian sailed westward into the unknown northern ocean.

For three months they went on without seeing land. But then there came a day when the man on watch shouted "Land ahead!"

"At last," thought John, "I have discovered the way to the land of Cathay."

Fortune did indeed seem to smile upon him. He sailed quickly along the strange coast, which, we think now, must have been Nova Scotia and Newfoundland. Quickly then he turned his ships around and hurried home to tell the great news that now England also had discovered the islands of the East.

Great honors were heaped upon John Cabot. The English called him "Admiral." They dressed him in silk. As one man of the time said, "Everyone runs after him like mad." And everyone thought, "England will now share the riches of the East with Spain."



FIG. 29. John Cabot leaving Bristol to explore the northern seas.
Although he did not find a new route to India, he reached North
America

Sebastian Cabot Explores the Northern Coast of America

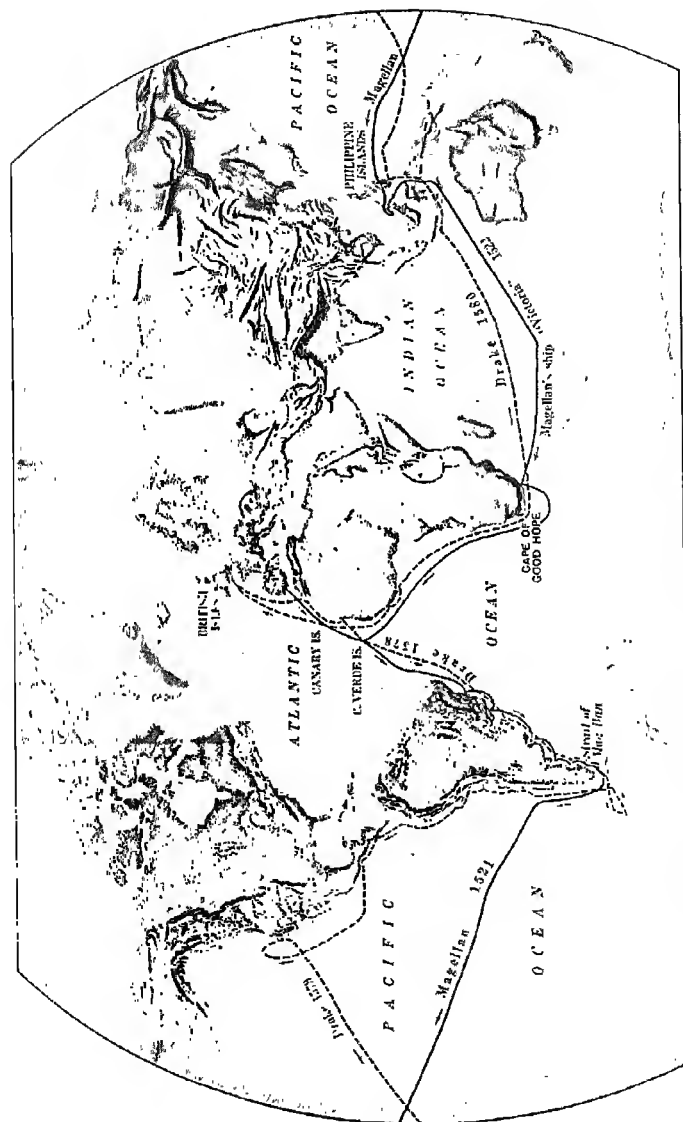
John Cabot's rewards did not end with his own honors. A few years later his son Sebastian, who had shared his father's hope to find Cathay, came sailing home from a long exploring trip to Newfoundland and the eastern coast of North America. He told his friends how in that faraway sea he had found huge "heaps of ice swimming on the sea" and large numbers of big fish.

"But what about gold and jewels and spices?" asked his friends. There seemed to be none at all. The land was cold and swept by icy winds, not tropical like the "Isles of Spice."

As time passed the people of England began to understand, as did those of Spain and Portugal, that this land which the Cabots had found was not Cathay, but a new and strange continent.

About 20 years after Columbus's last voyage, a Portuguese captain by the name of Magellan, sailing for the Spanish king, started to sail round the world. In 1519, 1520, and 1521 he explored along the coast of South America and sailed across the Pacific Ocean to the Philippine Islands.

On one of these islands Magellan was killed, but his sailors continued on. Slowly they made their way through the southern Pacific seas near the equator and



Map 8. The lines show where Magellan and Drake traveled when they sailed around the world

across the Indian Ocean (see map 8, page 87). Then on they went, round the Cape of Good Hope, at the southern tip of Africa. Three years from the time they started from Spain they returned there.

Magellan and his men had proved several things. One was that the earth is round and that Cathay could be reached by sailing west. It was a long way, of course, as long as going south and east around Africa. But it could be done. They had also proved, however, that a huge continent stood between Europe and China.

One more thing the explorers did. They gave the map-makers new places to put on their maps — new continents . . . new islands . . . new sailing routes across the oceans.

Then Came Stirring Times upon the Seas

More news came to England. The Spaniards were bringing the great riches of the Indians from the New World. Their ships were filled with gold and silver and precious jewels. Could not England get some of this wealth?

Soon daring English captains were sailing the seas. Many an honest navigator turned "pirate" and captured Spanish ships, bringing them back to England's busy harbors. Perhaps the English captain whom the Spaniards feared most of all was Francis Drake.

His name struck terror all along the Spanish Main, as the northern coast of South America from the Isthmus of Panama to the Orinoco River was called. Even through the Strait of Magellan, near the southern tip of South America, he went and north along the west coast of "Peru."

Sailing in his own ship, *The Golden Hind*, he was ever on the watch for treasure ships. From time to time the lookout, the man on watch, would shout from his perch high up on the mast of Drake's ship, "A sail! a sail!" From the deck came the captain's commands: "Out with all your sail! Chase the enemy!"

Heavy sails are raised. Back from the lookout come the words "He holds his own! No; now we gain on him!" Hour after hour the race continues. At last Drake's ship moves up beside that of the Spaniards.

Drake calls upon them to surrender. The Spaniards recognize *The Golden Hind*. An English pirate! They move away, at the same time trying to aim their guns at the English ship. Drake blows shrill and long on his whistle. The English sailors fire their guns. Balls whiz through the rigging of the Spanish ship. Down comes the mainmast. The ships swing close together. Quickly the English sailors jump from their decks onto the decks of the Spanish ship. The Spaniards now know that they cannot win. The captain of the treasure ship surrenders.

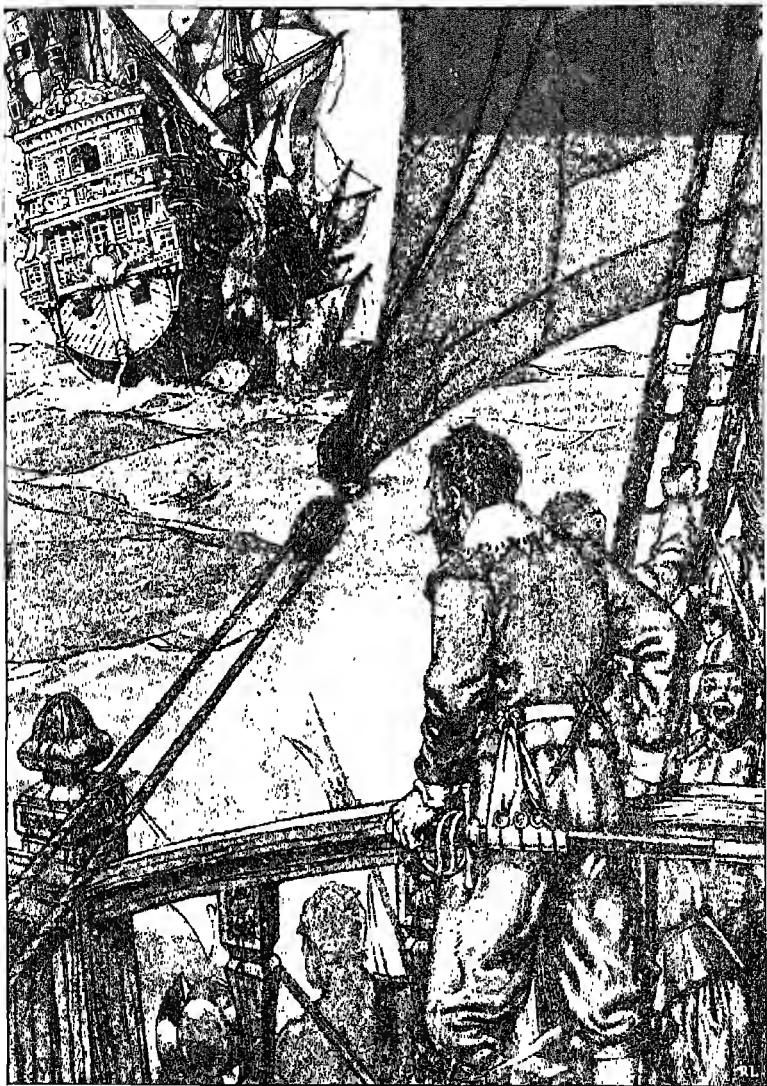
Northward Drake sailed with the many chests of silver and gold, jewels, and other precious things. Up the west coast of Central America he went, knowing full well that he dared not return around Cape Horn and across the Atlantic Ocean to England. Along the entire coast angry Spanish sailors would be lying in wait for him.

There was nothing to do, then, but to turn toward the open seas of the northwest. But what was this sea? Surely it was not the Atlantic Ocean. No; it was the ocean that Balboa had seen from the top of the mountains of Panama. This was the ocean that Magellan had called the Pacific.

So Drake turned *The Golden Hind* north and west, saying: "What does it matter if Englishmen have never sailed this sea before? Sound the drums and trumpets for Queene and Merrie England!"

So it was that Francis Drake came to the beautiful coast that is now California. He anchored in a small bay about fifteen miles north of where San Francisco is now. We call it Drake's Bay. Dark-skinned Indians, filled with wonder and fear of the pale-faced men on the ships, came bringing peace offerings to these strange human beings. It must have been an exciting time for these Englishmen so many thousands of miles away from home.

Drake liked this great new country. He had sailed



Robert Lawson

FIG. 30. *The Golden Hind* captures a Spanish treasure ship

along it as far north as where Oregon is today, and he now claimed it for his queen, Elizabeth. During the winter in Drake's Bay he repaired his ship, and when spring came he sailed westward across the Pacific. Month after month he sailed the Pacific Ocean as Magellan had done years before him, around the south-east coast of Asia and across the Indian Ocean. At last he went round the Cape of Good Hope and turned to the north. Two years and ten months from the time of leaving England he and his good ship, *The Golden Hind*, were safe once more at home.

Drake too was hailed as a great hero of England. Queen Elizabeth made him a knight. Ever after he was called Sir Francis Drake.

**Explorers from France and Holland Also Joined the
Search for the Passage to the East Indies**

Meanwhile the French and the Dutch, not wishing the English and the Spanish to get all the new-found riches, also began to explore in the New World. Their captains also tried to find the northwest passage.

Years passed — the 1540's, 1560's, 1580's, and then the 1600's. During all these years, as you know, the Spanish were conquering and settling Central and South America. The Portuguese were building their settlements along the east coast, which is now Brazil.

The Dutch sent an English captain, Henry Hudson,

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to see if he could find the northwest passage to India. You know the story of how Hudson sailed into the great harbor where New York City is now; how he went up the river that now bears his name, as far as the rapids near the city which is today called Albany; and how he came back and sailed away.

Fifteen years later (1624) a little band of settlers landed in New York harbor. They traded with the Manhattas and started a little settlement. You have already read the story of how this settlement became the city of New Amsterdam, and how in 1664 the English captured it and named it "New York." Today it has become one of the biggest cities in the world.

So It Was That the Early Explorers Found the Continents of North and South America

So, one by one, the great nations of Europe sent many brave adventurers to the New World. They visited the shores. They wondered at the sights and the people who met them there. But they did not stay and make their homes. They were only explorers looking for a way to "get rich quick." They were not settlers.

One by one they all put back to sea. None of them knew how valuable was the land they had discovered. After they left the American shores, tides washed away their footprints. New grasses and flowers covered the spots where they had made their short visits. The

Indians who lived on the land wondered at their going away. It was all as strange as their coming.

For more than 100 years after Cabot came the great continent of North America remained undisturbed.

Books You Would Like To Read

AULAIRE, MRS. I. D', and AULAIRE, E. P. D'. Conquest of the Atlantic. The Viking Press, Inc., New York. About the explorers of the Atlantic from the earliest days, including the story of Columbus. Beautifully illustrated.

BEARD, CHARLES A., and BAGLEY, WILLIAM C. A First Book in American History. The Macmillan Company, New York. See Chapter I, "The Beginning of the Story," Chapter II, "Exploring Unknown Seas," and Chapter III, "Breaking into the Spanish Treasure House."

BROOKS, E. S. The True Story of Christopher Columbus. Lothrop, Lee & Shepard Company, Boston.

KELLY, M. D. The Story of Sir Walter Raleigh. E. P. Dutton & Co., Inc., New York. His early life and his explorations.

KELTY, M. G. The Beginnings of the American People and Nation. Ginn and Company, Boston. See Unit II, "How the Nations tried to get Wealth from the New World."

POTTER, EDNA. Christopher Columbus; the Story of a Great Adventure. Oxford University Press, New York. A thrillingly written story.

SHAW, E. R. Discoverers and Explorers. American Book Co., New York. Simply and interestingly told.

SPOERER, GEORGE R. The White Man Comes (one of Our Changing World Series). Thomas Nelson & Sons, New York. Henry Hudson sails on the *Half-Moon* to America.

TAPPAN, E. M. American Hero Stories. Houghton Mifflin Company, Boston. See the stories of Columbus, Magellan, and Drake.

CHAPTER VI

Discontented Englishmen Settle New England, 1600-1775

ABOUT 1600 a few Europeans, especially Englishmen, began to think of the large unsettled continent to the west as a place to which they might move and where they might build new homes. Living was hard in England. There were many things which the English did not like.

Surely it would be better in the wild forests of North America! Explorers who had returned said that there were millions of acres ready to be taken by the first person to come. Only a few Indians lived on the land. The soil was good. Most of the year the climate was mild. Summers were hot, making a long growing season for crops. Surely it was a "land of opportunity."

So it was that, after 1600, more and more Englishmen began to think seriously of packing up, selling their belongings, and sailing off to America. And in the same years German, Dutch, French, and Swedish people also began to talk about going to the New World.

To understand more clearly their reasons for leaving their own country, let us look back into the lives of

some of these discontented people. We can then learn why they were unhappy in their homes across the ocean. Perhaps then we can understand better how they found the courage to brave the wilderness of the new continent.

Let us imagine ourselves in an English village in 1629, for that was the first year in which very large numbers of English people came to make their homes in "New" England. Remember that it is a farming village, for England was a farming country in 1600. There was not an engine or a machine, a railroad or a telegraph, or an automobile in all their lands. There were a few towns, but most of the people lived on farms and in villages.

The next two stories will give us a picture of the way the people were beginning to feel about life in England.

I. An English Farm Family Decides To Go to America

Betsy, the plump, red-cheeked wife of Thomas Rogers, bent over the big iron pot which hung in the fireplace. Steam and pleasant odors rose as she stirred the food with a horn spoon. She and Thomas, after a hard day of labor in the fields, were about to sit down to their evening meal — a stew of beans, cabbage, onions, and dried peas.

She rose as Thomas entered the room, wiping her hot face on the corner of her apron.

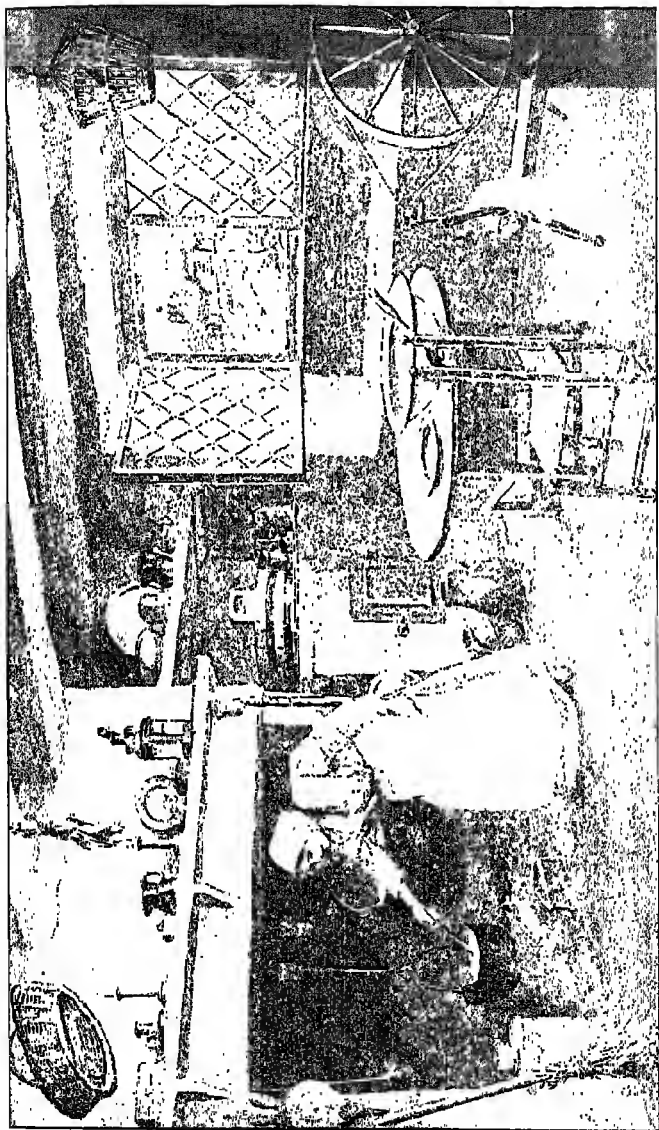


FIG. 31. The home of an English farmer and his wife about the year 1600. Many people, like Betsy and Thomas Rogers in the story, packed their things and set sail to make their homes in the New World

"Hast put the lambs in the fold, Tom?" she asked.

"Aye, that I have, blast them!" exclaimed Thomas. "These silly sheep be the cause why we're having to leave our cozy cottage."

Betsy glanced about the one bare room. It looked like a palace to her at that moment, though there was only the bare ground for a floor, and the autumn wind howled through the window frame. It seemed as though every gust would send the thatch roof flying. Many times Betsy had complained to Thomas that they would be homeless if a spark should set fire to the thatch. But now that she had to leave it, her home seemed very dear to her.

"Sir John's a cruel man to drive us off our land," sighed Betsy.

"Aye, lass, we've worked hard here. 'Tis cruel to think a fine lass like you, born to the land, should be leaving it. My people, the Rogerses, have held this since the days of good King Alfred. And to think that Sir John wants now to use it all for himself."

"Never ye mind, Tom," said Betsy. "There's not a better wood carver in the whole county than ye be. An' if I must say it, there's naught better than the wool I spin and weave. I'll not be without work in London."

"Nay, my dear," said Tom, shaking his head. "There be plenty of strong ones like you and me a-starving in London streets."

"Well, old man," replied Betsy, with spirit, "we'll not starve along with others. We've saved up a pretty penny. Before we go hungry in London we'll move to America. I'm thinking we'd not be long there before we'd have a cottage as pretty as this. What think ye?"

"Aye, lass, ye're a great one. I'd been thinking those very thoughts myself, but I didn't like to tell ye. I feared ye might be thinking of redskins or the risk of going hungry there."

"If I must starve," answered Betsy, "I'd rather be doing it in the new land. But methinks folk with strong backs like ours will not go hungry while there's good land to sow and reap. More likely we'll soon be rich there."

In many villages and towns of England other cottagers and craftsmen, like the Rogerses, were facing starvation. For many, many years they had lived on the land owned by the squires. Now they were being asked to go away. You can see why they would be discussing plans to leave England.

2. Well-to-do Englishmen Went to America for Another Reason

But it was not only the poorer people who talked of America in those difficult days. Even the more well-to-do people of England were becoming discontented.

In these years of the 1600's the king was trying to compel all Englishmen to belong to one church, the Church of England. Many people did not like this idea because they wished to worship in their own way. Some of the men and women united together to break away from the one church. The members of one of these groups were called Puritans and those of another were called Dissenters.

Many of them formed little churches of their own, but the king disliked this and made life very unpleasant for them. People were thrown into prisons and some were even beheaded or burned in the public places. The members of the king's church hated and punished those who did not belong to it, and the Puritans disliked those who belonged to the king's church. It was a time of great trouble and unhappiness.

There were many well-to-do merchants among the Puritans. These men and women were busy workers who believed in living in quiet and simple ways. When they learned that colonies might be formed in the new lands of America, many of them decided to seek peace and freedom overseas. Having saved some money, they were able to buy things to take with them to the New World.

Let us glance into one of these Puritan homes to see what was taking place while the Puritans were making up their minds to go to America.

"Cock-a-doodle-doo!" called the cock from the barnyard.

Faith opened sleepy eyes to see the same old four-post bedstead which had met her gaze each morning since she could remember. She snuggled more deeply into the feather bed and closed her eyelids again.

"Wake up, Faith! It must be past five, and father will be angry if we are late for prayers," whispered Constance.

"O bother!" exclaimed Faith, as she jumped from bed and started to dress.

In a few moments the two sisters ran downstairs to the drawing room, where the family stood, with the servants drawn up in a line on the side. They were just in time to see their father take down the heavy family Bible. John Ryner read from the Scriptures. Then he said a long, long prayer. Faith could not help fidgeting before he had finished, she was so eager to be out of doors. At last Master Ryner dismissed the servants and turned to his wife.

"Prudence, I am going to look at the pastures, which have just been drained. Do you take notice whether there are plenty of fish in the ponds."

Dame Ryner nodded, thinking of the many, many tasks which she, as mistress of the house, had to do.

Several hours later the two daughters were busily

studying their A B C's when Constance whispered to Faith, "Patience Godwin is going to America."

"Oh, everybody's going. I wish we were, too!" cried Faith.

"Sh-h-h!" whispered their governess. "Children should be seen, not heard."

Just then John Ryner's deep voice was heard from the doorway.

"How are my pets?" he called.

"Oh, father, did you know that Patience Godwin is going to America?"

"Is this true?" asked John of his wife, who was spinning yarn near the large window.

"I fear it is. Mistress Godwin has brought over her silver and asked me to keep it for her."

The father made a sign to the governess to take the girls into the garden. He did not wish them to hear his conversation. Then he turned to his wife.

"It's becoming worse and worse," he sighed. "How much longer will this king make life difficult for us? A king who takes from an honest man his hard-earned money! A king who throws away gold and pretends he is spending it on ships to fight the Spanish! Worse yet, Bishop Laud has been chosen to drive us loyal Puritans out of the land. There is no freedom! A man must hold his tongue or lose his head. And our wonderful church meetings must be kept secret and

our mouths closed! God grant the day may come when we can worship openly in peace."

"God grant it," added Prudence.

Faith and Constance rushed in from the garden.

"What is it, girls?" asked their father as they ran into the room.

"Oh, there's a Maypole at Mistress Deane's! How jolly it is! Such bright colors! Everyone is dancing and singing!"

"Constance! Faith!" said their mother, sternly. "The Maypole is the devil's work. Dancing is a sin in the sight of the Lord." To her husband she said: "We cannot have the girls living where such disgraceful things happen. Oh, I wish we could live where people would fear God and be good."

"Let us find out about America, where people can live and worship as they please," replied John. "We shall talk to the Godwins tonight."

Thousands of Englishmen Were Planning To Go

Conversations like those of the Rogerses and the Ryners were going on in hundreds of homes in different parts of England. If you could have ridden along the roads in 1629, you would have seen in many places men and their wives and children riding into the nearest town with their belongings on heavy carts. There they would be joined by other villagers from other parts



Fortunio Matassi

FIG. 32. These people are leaving England to make homes in the New World

of England. Together they would travel in a stage-coach to the little port town of Plymouth.

After waiting some days or weeks they would board one of the many ships that were being prepared for the trip to America. At last the day of sailing would come; sad good-bys would be said by relatives and friends. Then the ship would sail out of the harbor for its rough voyage across the stormy Atlantic.

What They Found in America

Perhaps ten or twelve weeks later the sailors would drop the anchor in the quiet harbor called Massachusetts Bay. It was named "Massachusetts" now, after an Indian tribe living in that region.

Can you imagine how eager the newcomers were to walk on land again after the long journey? Rowboats came out from the rickety wharves along the shore. The men and their wives and children were lowered to the boats and quickly rowed to the land. Then their axes, spades, shovels, hoes, saws, and other tools were taken off the ship.

What did they see on the land around Massachusetts Bay in 1629? Large cities, as they would today? No, indeed. A few log houses were built along the muddy roads, which twisted and turned up the hillsides from the edge of the water.

Most of the land which is now New England

was wilderness. For hundreds of miles stretched the forest, the meadows, and the rolling land that is now the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. Low hills and valleys, one after another, met the traveler for 100 miles back from the coast. Then rose the Berkshires with the Catskills behind them, the Green Mountains and the White Mountains, from 2000 to 6000 feet high. Behind them still higher rose the Adirondacks.

After the first immigrants had succeeded in clearing the land and planting crops on the thin, gravelly soil, other people came in larger numbers. In 1630 seventeen ships came to Massachusetts Bay in one fleet — 1000 people wanting land at one time. With each new shipload of people, more and more land was being claimed. Farther and farther from the shore went the settlers to build their little farms.

So the people built their log huts and made their "plantations." Gardens of Indian corn, pumpkins, fruits, and vegetables were planted. Many of these were new to the English. Strong docks were built so that the ships could come in. The forests were cut down. On the rivers sawmills were set up so that the huge trees could be cut into boards and timbers.

Around the village square, or common, larger community buildings were erected. Although at first the churches were made of wood, after some years the



FIG. 33. How the settler of the 1600's built his log cabin



Ewing Galloway

FIG. 34. Craigie House, built in Cambridge, Massachusetts, in 1769

The village carpenter showed them how to saw the timbers and put them together. They were nailed in place while on the ground. Then the carpenter would shout the orders: "Take holt, boys. Now, up with it!" And the whole side of the house would be raised into the air and fastened into place with wooden pins.

After the frame and the roof were up the people would have a party. The women had prepared a feast. Meat and vegetables, pies and cakes, were heaped upon tables, but the hungry men soon made them disappear.

After the meal was over, all joined in a country dance, with the village fiddler providing the music. Can you imagine how the people looked forward to "house-raisin's"?

During the 1600's more and more ships passed in and out of Massachusetts Bay. By 1640 nearly 14,000 people had come. After that so many crowded into the villages around Boston that the coming was called the "great migration." The colony became bigger and bigger, and the villages grew to be towns. Boston became the biggest of all, for it was at Boston harbor that most of the ships continued to load and unload their goods and passengers.

More and more years passed, and the first settlers became old and died. Their children became old and died. But Boston continued to grow. People built

roads and shops and stores and schools and churches. Year after year there was more work to be done and more people came to do it. The town grew and grew.

**The Colonists Begin To Move to the "Better Land
in the West"**

Almost at once, as the good land near the coast was claimed, the newcomers began to go inland. Some had heard that there was fertile farm land in the beautiful valley of the Connecticut River, 100 miles away to the west. Others found that even now in Massachusetts Bay Colony they could not worship or think as they wanted to. Still others were just restless wanderers.

But, for one reason or another, even as early as 1635 settlers were packing up in Dorchester and other villages near Boston and moving west. The next story, of how the Reverend Thomas Hooker moved from Dorchester to Connecticut and started the village of Hartford, is much like many others that took place in the next hundred years and more.

The "westward movement" toward the mountains had begun.

The First Settlement at Hartford, 1635-1636

On a beautiful day in May of the year 1636 a company of about 100 men, women, and children started out from the little colony at Massachusetts

Bay. Although they seemed gay as they said good-by to their dear friends in Newtown and Dorchester, they were sad. They knew how hard might be the days and perhaps the years ahead of them.

It was to be a long tramp for all of them; that is, for all but Mrs. Thomas Hooker, the wife of their minister and leader, the Reverend Thomas Hooker, whom they loved. She was an invalid and had to ride on a platform of "boards, swung between two horses." Driving their cows and pigs and oxen and other animals with them, the company trudged over hills and plains, across rivers, and through the winding valleys.

Of course this land was not entirely unknown; for the Bay Path, a well-worn Indian trail from Massachusetts Bay to Connecticut, had already been fairly well marked out. And there were the Indians living in the region—the Algonquins, the Mohicans, the Paugussetts, the Sequins, the Nipmucks, and the Pequots. Amusing names they may be to us now, but to the people of those days they meant strange, dark-skinned people whom the colonists called savages.

But when the Reverend Thomas Hooker and his people started out from Boston, these Indians were friendly to them. As Hooker's band drove their animals along, resting at noon for lunch and sleeping at night around campfires, the Indians helped them. They

sent messengers with corn and vegetables and perhaps some deer meat. They invited the company to visit at their villages of tents and log huts. And when Hooker's men were not sure of the trail, the Indians sent guides to show them the way.

In the month of October of the year before (1635), 60 other people had gone over this same trail. They had found the beautiful broad valley of what is now the Connecticut River (see figure 36), and on its bank had built a tiny village of log houses and dugouts. A hard winter they had had waiting for spring to come; but now June was here, and Hooker and the big party would be arriving soon to join them.

So although the Hooker band were going through strange country, it was not such a very hard trip. After traveling for ten days they came into the valley of the Connecticut and found the friends who were waiting for them.

The day after their coming Thomas Hooker and his men stood on a little hill and looked over what the earlier settlers had done. They had selected a fine place for the village. Nature had helped them in every way. The log houses had been built on sloping ground just at the point where a creek flowed into the Connecticut. So the Englishmen from around Boston settled along the banks of the two rivers.

What a beautiful valley this was! What gifts nature had for the settlers! Here were forests with many large trees for their houses. Over there was a clay bank from which bricks could be made. Stones were scattered about on every side—enough for stone houses. The Little River would provide water power, and this would turn their mill wheels. On the banks of the Great River they could build docks. Then boats from New Haven and the Atlantic Ocean could come up the river bringing things to buy and sell. Later they could send their own manufactured goods to be sold in other new colonies. Some things could go to the New Haven people. Others could be carried in the larger sailing boats to Plymouth and Massachusetts Bay colonies, or even to the Dutch in New York and the Europeans across the sea.

What Hooker imagined really came to pass. The village grew as more people "moved west." Up and down the Connecticut for 100 miles the land was cleared and other villages were begun. Along the Massachusetts and Long Island coasts, as well as the Connecticut shore of Long Island Sound, the same thing happened.

As you know from *Communities of Men*, the Dutch had already settled New Amsterdam. In 1664 the English captured the town and called it New York.



FIG. 36. The beautiful valley of the Connecticut River, through which Thomas Hooker and the other early settlers traveled

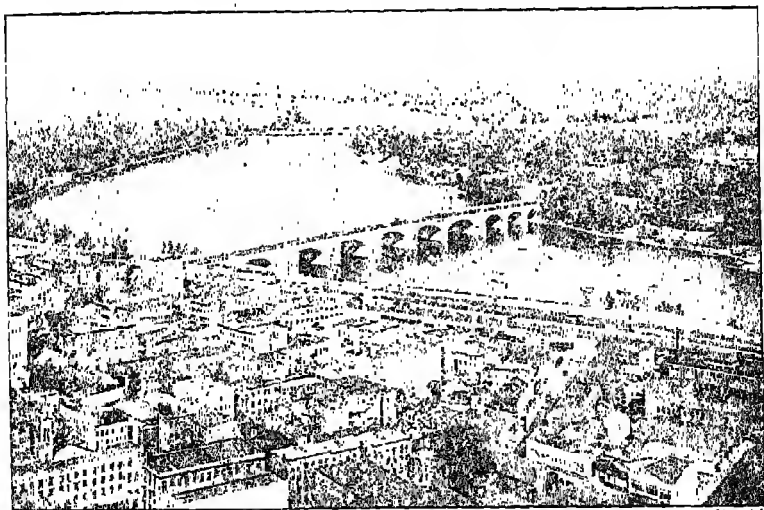


FIG. 37. Where the first settlers in Connecticut built their houses in 1635 the busy city of Hartford has grown

Newmuth

Up and down the Hudson River, even as far as Albany, Dutch and English farms and villages were being planned. South of New York and New Jersey and Delaware more villages were beginning to appear.

As the years passed, the westward movement of the settlers went from the coast toward the mountains. Step by step the brave Englishmen fought their enemies: the Indians, the forest, the cold and the heat, the snow and the rain. Step by step they cleared the forests and planted their farms and built their roads and their better carts and wagons.

So it was that the building of America started in the north and the middle of the Atlantic coast, in the regions that our people call New England and the Middle Atlantic States.

But while this was happening other Englishmen were packing up and moving out to the southern part of the Atlantic Coastal Plain. While some were building homes in New England and New York and Pennsylvania, others were doing the same thing in Virginia, Carolina, and Georgia. To that story we turn next.

Books You Would Like To Read

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- BARSTOW, C. L. (Ed.). *Explorers and Settlers*. D. Appleton-Century Company, Inc., New York.
- BEARD, CHARLES A., and BAGLEY, WILLIAM C. *A First Book in American History*. The Macmillan Company, New York. See Chapter VI, "Westward Ho!"
- CARPENTER, FRANK GEORGE. *How the World Is Housed*. American Book Co., New York. See Chapter VI, "Homes of Colonial Days."
- COATSWORTH, E. J. *Away Goes Sally*. The Macmillan Company, New York. Pioneer days in Massachusetts and Maine.
- DIX, B. M. *Soldier Rigdale*. The Macmillan Company, New York. The voyage of the *Mayflower* and life in early Plymouth.
- EGGLESTON, EDWARD. *Stories of American Life and Adventure*. American Book Co., New York. The life of the pioneers and the dangers of the frontier; the homes, clothing, schools, and the like of early America.
- FARIS, JOHN T. *Where Our History Was Made*. Book I. Silver, Burdett and Company, New York, 1923. See pages 37-68.
- HART, A. B., and CHAPMAN, A. B. *Colonial Children*. The Macmillan Company, New York. Extracts from contemporary sources. Many illustrations.
- LEETCH, D. L. *Annetje and Her Family*. Lothrop, Lee & Shepard Company, Boston. The life of a little girl in New Amsterdam when it was still a Dutch settlement.
- PERKINS, LUCY F. *The Puritan Twins*. Houghton Mifflin Company, Boston.
- PUMPHREY, M. B. *Pilgrim Stories*. Rand McNally & Company, Chicago. Why the Pilgrims came to America; their voyage on the *Mayflower*; their life in Plymouth.
- STONE, G. L., and FICKETT, M. G. *Everyday Life in the Colonies*. D. C. Heath and Company, Boston. Interesting short sketches of colonial life.
- USHER, R. G. *The Story of the Pilgrims for Children*. The Macmillan Company, New York. Interesting stories, with such characters as Bradford, Winslow, and Standish. The life of the Pilgrims is well described.

CHAPTER VII

Other Discontented Englishmen Settle the Old South, 1600-1775

Discontented Nobles Also Went to America

NOT ONLY did the farmers, craftsmen, shopkeepers, and merchants become unhappy and leave England for America; some of the nobles of the wealthiest class also went. Although they lived outside the cities and towns and owned large lands, they too were being made unhappy by the king. It was not only because of religion, nor was it because of trade, for they cared less about these than did the Puritans. It was because of the changes which were taking place in the government of England in the 1600's.

We must remember that for a long, long time the lords and ladies who lived in the castles on the large estates of England had ruled the English people. But as time went on and England turned away from farming to trading and manufacturing, the merchants of the cities and towns began to play a more important part in the government of England.

In the 1600's wars broke out among the people themselves; and at last a new government, under Oliver

Cromwell, ruled England. Now the lords of the country districts were the ones to suffer from the government. By 1650 life was made very unpleasant for them, and many began to talk about leaving their estates in England to go to America and try to become rich there.

Here is a glimpse of one of these homes in which the families were beginning to turn their thoughts toward the new lands in the west.

"Zounds! What a man this Cromwell is!" shouted the deep voice of Sir Robert Digby from the head of the long table. "He is not satisfied with murdering our good King Charles (may God grant him peace) but now he must murder all our king's friends too!" He glanced round the table heaped high with spiced meats, breads, and delicious cakes.

It was an interesting group which was gathered there at Digby Castle. Ladies, with hair dressed high, wore gowns of embroidered silks and satins, and beautiful laces. Beside every lady sat a noble as well dressed as she. He wore a long curled wig, rich velvets and brocades, fancy lace cuffs, and silk hose.

"Cromwell asks *us* to agree to his order to put the Puritan religion in the place of our good king's church. Of course I refused! Think you I would disgrace my family, which, for centuries, has been loyal to the royal family?" exclaimed a guest.



FIG. 38. Dinner in an English castle in the 1600's. Wealthy people like these also sailed to America to make new homes

C. L. Woodward

"Nor I, though I had to give up the land which the first Sir Robert Digby received from Henry IV," returned Sir Robert. "If it must be — and, pray God, never, — I will go to this new land America, of which we hear such strange and wonderful stories. Not Cromwell himself nor all his armies can force me to break my loyalty to our murdered king."

"How would you enjoy America, Elizabeth?" asked a young lord of his charming neighbor. "Imagine Indians eight feet tall and dragons and five-headed cannibals!"

Elizabeth's eyes grew large at the mention of such horrible things. "May God help us! Never!" she cried with a shiver.

"And why is my little daughter praying to the good Lord?" called Sir Robert, who had overheard her last remark from his seat at the head of the long table.

"'Tis of that wild land America that Randal is speaking. I would not leave England."

"Nor I, little one. May God forbid it. Yet Randal is but teasing you about this new land. Savage the Indians may be, yet the land is rich and fertile. Many good Englishmen will surely go there to make new lives."

"Is it not strange that these Puritans do not seem to mind at all leaving their homes? I hear that between 1630 and 1640 more than 14,000 of them left to go to the colonies," remarked Chaplain Clark.

"It is because many of them are newly rich, these tradesmen and merchants," remarked young, excited Darl Digby. "Most of them are of no family. The land they have is not that which their ancestors have owned for centuries. They do not love English soil as we do."

Softly Sir Robert Digby added: "God grant that they do not make their new laws against us. I pray my home may be a home for Darl and his children and their children's children. Yet if things go on in this way we cannot remain here much longer. We shall go to America to find freedom."

Others Were Eager To Go to America for Another Reason

There was still another group of people who were ready to leave England in these early 1600's. They were neither the God-fearing farmers, nor the business men, nor the gentleman landlords. They were the prisoners in the jails.

Many of them were hard-working, honest people who had been put into jail for not paying their debts. In those days poor people, especially those in London and the larger English cities, who were not able to pay what they owed were thrown into prison until they should be able to do so. Some people had spent years in prison; others, a lifetime. Today this seems cruel and unwise; for people who are in jail cannot earn

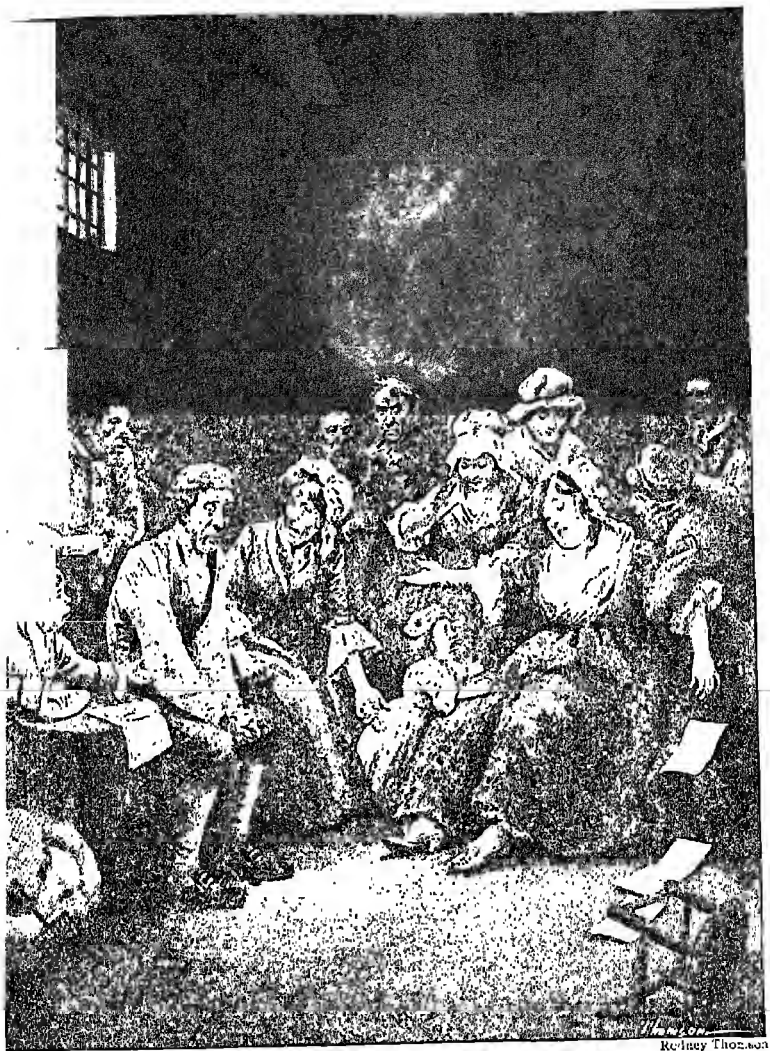


FIG. 39. When those who owed money could not pay their debts, they were cast into a prison such as this. Do you think that was an intelligent way of punishing them?

money, and if they cannot earn money they cannot pay their debts.

The number of people who had such debts during these days was very large. The prisons had become too crowded, and living in them was very unpleasant. Prisoners lacked air, light, even water with which to keep clean. They lived in the same rooms with those who were criminals. No food was given them except what was brought by relatives or friends. Some people died there while waiting to be set free.

During the reign of Queen Elizabeth laws were passed stating that certain of these prisoners should be sent to lands far away. Later King James I ordered over 100 people to be sent to the new America. Soon after the colonies were begun a plan was started by which men could leave the prison and go to America. Here they would work as servants or laborers for a colonist who had paid for their ocean trip. They would receive no pay for several years. At the end of that time, however, they were to be given their freedom and might become citizens of the colony.

This plan proved to be good not only for England but for America. England was glad to be rid of these prisoners, who crowded the jails. It was also welcome to men in the colonies who needed laborers. In the end it was good even for the servant, for he thus had a chance to work out his freedom and to get a fresh start.

The More Well-to-do Settled Virginia

Even before the Puritans were braving the wilderness of New England in the north, nobles and squires were settling along the rivers and smaller streams of Virginia. Forty years before the Massachusetts Bay settlement Sir Walter Raleigh had tried several times to begin colonies on the fertile soil near the Virginia coast. But each one had failed. In 1607 another was tried at Jamestown. But even that settlement was nearly wiped out. People starved or died of illness. Sometimes unfriendly Indians destroyed whole villages. But gradually, as the white people learned how to drive off the Indians and to raise crops, the Virginia colony grew.

Nature Helped the "Virginians"

The land and the climate of the Southern region was different from that of New England. In Virginia and to the south of it the plain between the coast and the Appalachian Mountains was wider than in the north. The land was level and the soil was rich. Rivers ran gently, and boats could go up quite a long distance from the sea. The temperature was hot in summer and mild even in winter.

What would grow best in this land? The settlers tried many crops, but none seemed to grow so well as

tobacco. Of course these English squires had known tobacco. Sir Francis Drake had brought it to England more than 40 years before. He had also taught his friends to smoke. Although some people of Europe disliked the idea of smoking tobacco, others began to use it, and its sale grew rapidly.

The Virginians soon saw that since tobacco would grow on the rich Virginia soil, it was tobacco that would make their fortunes. Here was wealth, not in shining gold but in the leaves of a plant. Large quantities of it could be sold in England and other European countries. And so they started to plant tobacco.

The Small Farms of the "Back Country" People

The years of the 1600's passed — 1630's, 1640's, 1650's, 1660's — until 150 years had gone by. During these years more immigrants had come to Virginia from England. They went up the little streams and began to lay out farms along the rich lowlands. The poorer farmers were at first content to build little shacks of logs. Later they replaced them with larger frame houses.

Each family raised his few acres of tobacco. When the tobacco was ripe the farmer harvested it. Then he put it on a little boat and took it downstream to the wharves in the town. There it was loaded on a ship to be sent to Europe. If he lived away from a

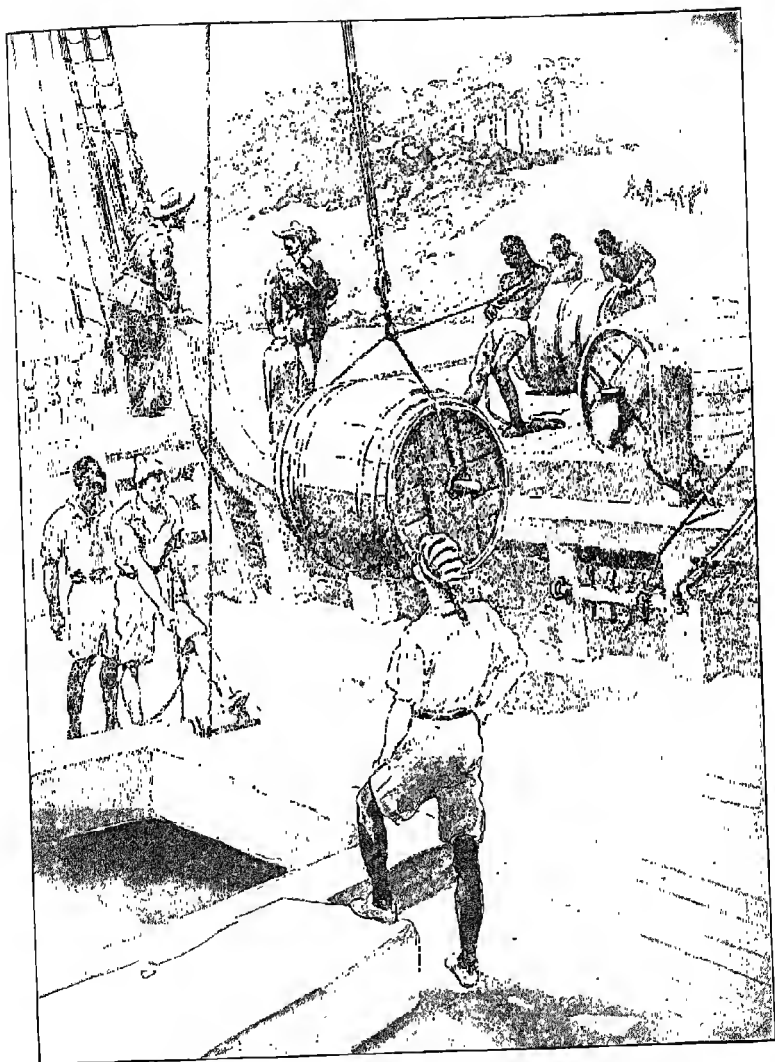


FIG. 40. Virginia settlers loading a ship with casks of tobacco to send across the sea to Europe. How do you think they got the casks to the wharves?

river, he packed it in a great round cask, or barrel. Then he hitched horses or mules to the cask and rolled it along the ground (figure 40). This was called "rolling tobacco."

The well-to-do planters, as the men who owned the plantations were called, became the country gentlemen, or squires, of the new America just as their fathers had been squires in England. They laid out huge farms called plantations. Some of these were as large as several villages are today.

A Southern Plantation in 1760

Let us imagine we are traveling through the huge plantation of Colonel Robert Byrd. It is 1760. There is a blue sky overhead. The air is soft and very warm during the long summer days. To reach "Belvidere," the lovely mansion set high on a hill, we have driven along through a wide-spreading valley.

How well the setting for the house has been planned! From it we can get a fine view of the river, which at this point is half a mile wide. Far in the distance we see some villages, and beyond these the main river winding quietly through a great wilderness.

We drive through the plantation itself. To our astonishment we learn that it covers several thousand acres. "Just like an old English manor," we think. Hundreds of houses are scattered over miles of land.

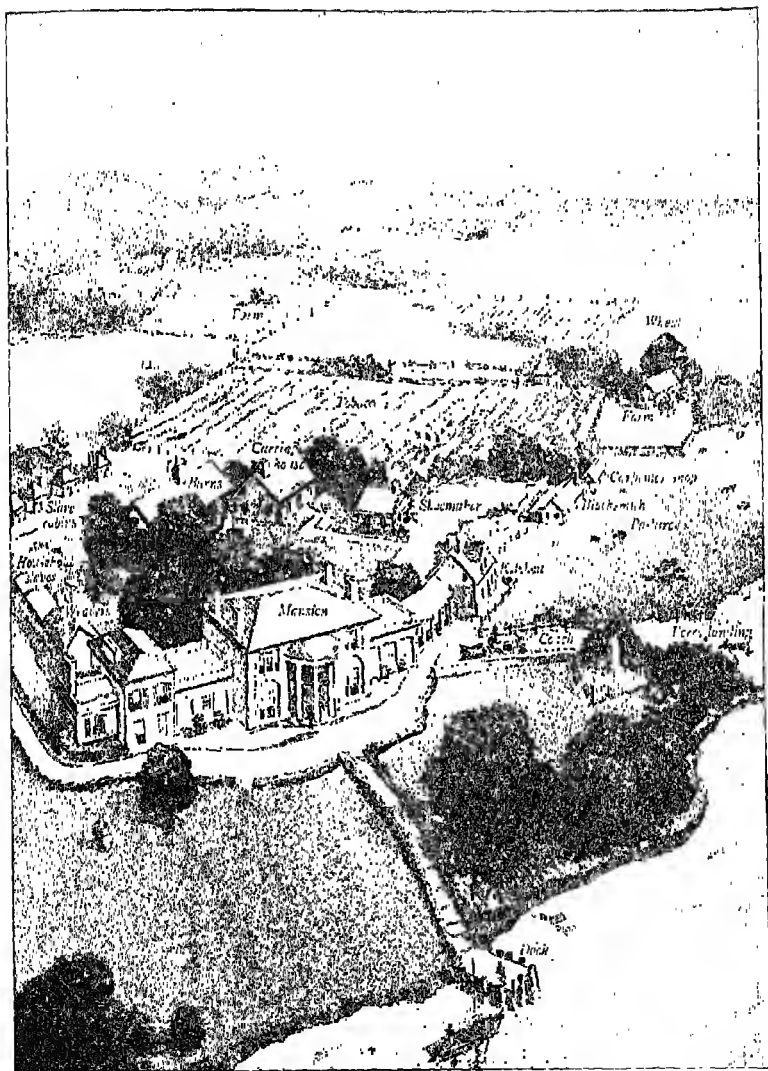


FIG. 41. The plantation of the Old South was a self-sufficient community. Can you see how almost everything could be provided?

Here are many complete farms. Fields of ripe wheat and barley and corn are ready to be cut. Hundreds of cattle graze on the hillsides. Pigs and hogs lie in their pens beside the great barns. All these farms supply food to the hundreds of people who live on the plantation. But the crop that we see in field after field is tobacco.

Who are those dark-skinned people working in the fields? Negroes, of course. We learn that for 140 years most of the labor on these Southern plantations has been done by Negro slaves.

In the year 1619 a Dutch slave ship arrived at the shores of Virginia bringing 20 Negroes who had been captured in Africa. These strong men were sold to the Virginia planters. In those days the colonists thought little of buying and selling human beings, just as they bought and sold horses and cows and oxen. After 1619 they used the Negroes to do the unskilled work on the farms.

Not only are there Negro workers on Colonel Byrd's plantation, however; there are white craftsmen as well. We pass by several houses in which live the shoemakers. Most of the shoes for the hundreds of people on the plantation are made by them. Of course the shoes for the owner and his family are imported from England.

Our guide tells us that the houses over there are the homes of the spinners and weavers. They make the

cloth for the garments of the slaves and servants and other workers. Garment-makers also live near by. Down that road we come to a blacksmith shop. Inside a skilled blacksmith is at work at his forge. Here is everything needed for making things of iron. Next door is a carpenter shop. All the buildings and most of the furniture on the plantation are made by carpenters and cabinetmakers whom Colonel Byrd has brought to the plantation.

The owner of the plantation manages all the matters of farming and industry. His wife, the lady of the house, sees to the education of her children, as well as entertains the guests, sews, and directs the servants in the care of the house, preparing meals, and the like.

"Mount Vernon," the plantation of General George Washington, covered thousands of acres. The land on which the house was built was a beautiful place on the bank of the Potomac River (figure 43). As years went on, General Washington bought more and more lands, some of which were wild forests located in the Appalachian Mountains, many miles to the west of Virginia.

We see, then, that the Southern plantation of 1760 was a community in itself. Nearly everything needed for living was grown or produced there. Almost nothing was brought in from abroad. We say it was a "self-sufficient" community.

In its play as well as its work the plantation was also a community. What a gay life these wealthy plantation owners lived! With all the labor of the plantation done by others, they were free to spend much time in entertaining and visiting back and forth. It was a time of card playing and dancing, feasting and drinking, racing and riding and hunting. A host never knew when a group of five or ten neighbors would "drop in" to make a visit of a week or a month. But everything could be prepared easily, so visitors were always welcome. A life of leisure and luxury it was, indeed.

This must complete our short glimpse of the Virginians. We do not have space to tell the story of other colonies of the South. We can only say that other Englishmen came and settled Georgia and South and North Carolina. (Find these, south of Virginia, on map 3, pages 10 and 11.) As the years went by the land became crowded and people began to leave the coast and go to land near the Appalachian Mountains. By about 1780, the time of the War of the Revolution, the colonists had begun to clear the forests and plant their crops even on the west side of the mountains.

So in Virginia and the South, as well as in New England and the North, the westward building of America was beginning. This did not take place rapidly, however. For more than 150 years after 1600



FIG. 42. This Virginia mansion was built by William Byrd in 1734

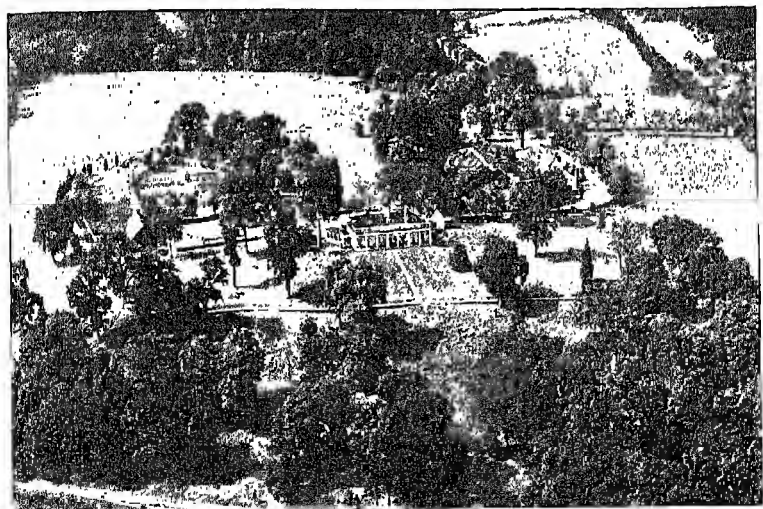


FIG. 43. Mount Vernon, George Washington's beautiful plantation home on the banks of the Potomac River

the settlers lived on the rolling lands of the plain along the Atlantic coast. By 1775 their homes had reached to the mountains.

Then it was that they started across the mountains into the broad valleys where Ohio and Kentucky are today. That is the story of later chapters. Before we read it, however, let us see what the "geography" of the Atlantic plain of North America had to do with the English settlements. That is to be the story of Chapter VIII.

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- LEETCH, D. L. *Tommy Tucker on a Plantation*. Lothrop, Lee & Shepard Company, Boston. Plantation life in colonial days in old Virginia.
- LINDSAY, MAUD. *Little Missy*. Lothrop, Lee & Shepard Company, Boston. A modern story, but gives a good picture of life on a Southern plantation.
- PERKINS, LUCY F. *The Colonial Twins of Virginia*. Houghton Mifflin Company, Boston. Life on a great Virginia plantation 100 years before the Revolution.
- STONE, G. L., and FICKETT, M. G. *Everyday Life in the Colonies*. D. C. Heath and Company, Boston. Interesting sketches of life in Delaware, Virginia, and Georgia.

CHAPTER VIII

Geography and the First Settlements

The Atlantic Coastal Plain

AS YOU know, the American colonists had settled on the land between the Atlantic Ocean and the eastern mountains. This land, shown on map 4, pages 14-15, is called the Atlantic Coastal Plain. You can see that it is well named. It lies along the Atlantic coast of the United States from Cape Cod, in Massachusetts, to Florida and, for the most part, is fairly level and low. At most it rises only a few hundred feet above the level of the sea.

How the Coastal Plain Was Made

Scientists think that millions of years ago this plain was part of a shelf of low land lying under the Atlantic Ocean. As the years passed, the rivers that flowed down from the Appalachian Mountains brought great quantities of sand, mud, and gravel which they dropped on the ocean floor. Slowly this part of the ocean floor was built up. Higher and higher it rose, until it was completely out of the water. In this way the rich coastal plain region was added to our continent.

**The Old Eastern Mountains Made a Wall for the
Early Settlers**

Notice on map 4 also that mountains extend all the way from Georgia to Maine. Although they seem to be one range, they are broken by low places so as to make five separate ranges. We should remember the location of each of these.

The Appalachian Mountains, from Alabama to Pennsylvania, rising from 2000 to 6000 feet above sea level. In the Appalachians there are smaller ranges which we shall hear about later.

The Catskills, in the east and center of New York State, from 2000 to 4000 feet high.

The Adirondacks, in northern New York, from 1000 to 5000 feet high.

The Green Mountains, in Vermont, from 2000 to 4000 feet high.

The White Mountains, in northern New Hampshire and Maine, from 3000 to 6000 feet high.

These are the main divisions of the eastern mountains. What a barrier, or wall, these old mountains were to become to those who wished to go West! And yet they were only hills compared with the giant Rockies and coast ranges of the West.

The Appalachians and other eastern mountains are old, very old, while the Rockies are mere babies—only 20,000,000 years! A hundred million or more years ago the earth was shaken and torn in one of its tremen-

dous changes. During that time the Appalachians were pushed up from the surface. Then year after year, century after century, the rain and the wind, the snow and the hail, beat down upon them. Slowly the sharp peaks wore off. Stones rolled down into the valleys. As streams of water ran off the sides they too wore the mountains down. Rocks became ground up into stones and gravel and sand. At last soil covered the mountains from the very tops to the deep places in the valleys below.

On this soil grew the seeds of thousands of kinds of plants. There were trees of many kinds — maples and elms and oaks, firs and pines, and many, many others. There were bushes and shrubs. There were grasses and mosses and ferns. So it was that a thick covering of vegetation grew over the eastern mountains.

Can you imagine how long a time would be needed for that to happen? A hundred million years, indeed! Is it any wonder that the Rockies have so little vegetation when they are only 20,000,000 years old?

The Shape of the Atlantic Uplands and the Plain

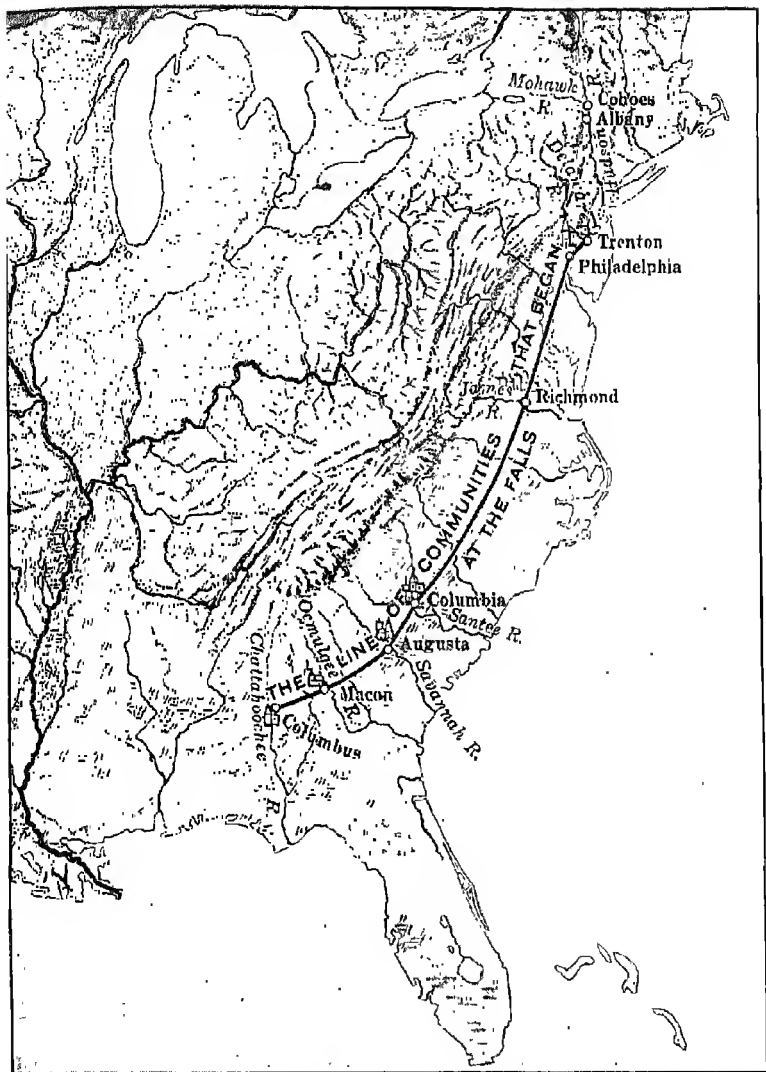
Map 4, pages 14-15, shows that the mountains do not run in exactly the same direction as the coast line. Thus, the Atlantic plain is somewhat three-sided, or triangular, in shape — much wider in its southern than in its northern part. In Georgia the distance

between the ocean and the mountains is 250 miles and more. In Virginia it is only from 100 to 150 miles. In Maryland and New Jersey it is still narrower, the hilly land finally running quite close to the shore.

Map 4 also shows that in some places along the coast it is not all low plain. The land is hilly — rising to several hundred feet above the sea. This is called "upland" or "plateau." The upland extends all the way from Georgia to Maine. In New England it runs right down to the shore line and is called the Coastal Hilly Belt. We can see, then, that Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, and New Jersey have a "coastal plain." Pennsylvania has none, and New York and the New England States have a very small share. The land along the coast of these states is rolling, hilly country (figure 44).

Settlements Were Made at the Falls in the Rivers

Now the height of the land had much to do with the places where settlements were made. Find the following cities on map 9, page 139: Trenton, New Jersey; Richmond, Virginia; Macon and Augusta, Georgia. Notice that each one is located on a river, and not only on a river but at a certain place on the river. That happens to be either at a waterfall or at a rapids. Do you know why?



MAP 9. The "fall line" where cities grew up

When the first settlers came in their boats, they sailed up the rivers, hunting for a good place to build their homes. As they went on, the stream would get smaller and more shallow. Then the travelers reached a place where the upland dropped down to the plain below. Here there would be waterfalls or sometimes rapids. The water rushed over rocks and stones, making it dangerous and sometimes impossible to travel farther in their boats.

Since the explorers could go no farther, they would leave their ships and build a settlement on the shore. This was done on the James River, in Virginia. A little settlement was made at the falls, where the city of Richmond now stands. Those who sailed up Chesapeake Bay and the Patapsco River made Baltimore. Others sailed up the Schuylkill River, but they too had to stop at the falls, and there the city of Philadelphia grew up. Trenton, on the Delaware River, in New Jersey, became a community at the shallow place. In the south are Columbia, in South Carolina; Augusta and Macon, in Georgia; and still others.

On map 9, page 139, you will see a heavy black line connecting these cities from Trenton to Columbus. This imaginary line, joining the cities which grew up near falls in the rivers, is called the fall line. Do you think it is well named?

**Soil and Vegetation Were Different in the Northern
and Southern Parts of the Plain**

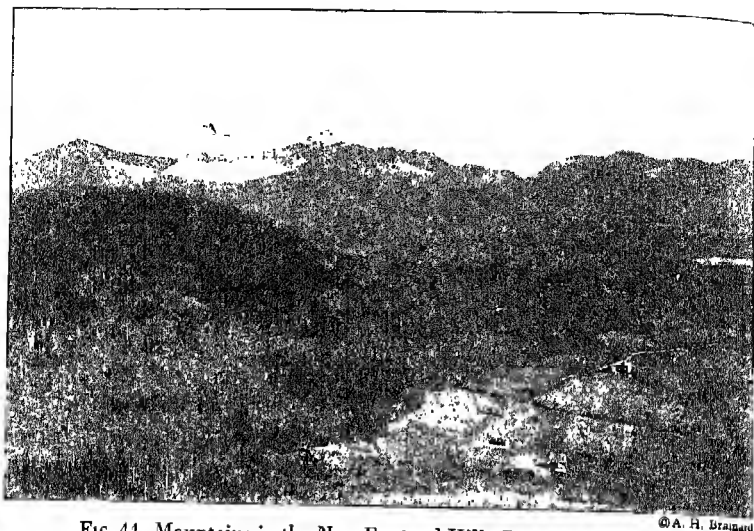
The New England Hilly Belt

Do you suppose that the early English settlers of the North found the same kinds of soil and plants as those in the South? No, indeed. As you know, those who came to New England and New York and Pennsylvania, in the North, found heavy forests. They had to cut down the trees in order to make room for their houses near the shore. They used the trees, of course, as material for their buildings.

The land of this rolling hilly belt was filled with boulders, stones, and gravel. Later the New Englanders learned how to use the granite and sandstone and limestone as building material for houses and roads. But the soil in most places was sandy and thin — not very good for farming.

This was not true in the valleys of the rivers, however. Here was the soil that had been carried down from the hills and mountains and left along the river banks. In the beautiful valley of the Connecticut River, for example, there were many acres of rich soil. We can be sure that these river valleys up and down the coast were the first places to be settled.

But we can also be sure that those Englishmen who settled along the coast from Maine to Connecticut,



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FIG. 44. Mountains in the New England Hilly Belt. Compare this region with that of the Atlantic Coastal Plain, figure 45



Ewing Galloway

FIG. 45. Truck farming on the Atlantic Coastal Plain of New Jersey

and those who went inland into New Hampshire and Vermont, had a hard struggle to raise their crops. It was a back-breaking task to dig out the boulders and smaller rocks. But they did make interesting stone walls to separate the farms, and today all over New England these walls can still be seen.

In spite of the rocky or sandy soil, the colonists learned that by using fertilizers they could raise fruit and vegetables. There was market gardening, especially in the middle region, and fruit was raised all the way from New England to the Southern settlements.

The South Atlantic Plain

You have seen that from New Jersey and Delaware to Georgia and the Gulf of Mexico the land widens more and more into a broad and level plain. Here the soil was much richer and better for agriculture than that of the North. Fertile soils were gathered, especially in the valleys made by the rushing of the water of the rivers through millions of years. It was on these lands that the large plantations of the South were made.

On the uplands bordering this southern plain and on much of the coastal plain itself, there were forests, one of the most valuable gifts of nature to the settlers from Europe. From the beginning lumbering became one of their chief ways of making a living.

These were two ways, then, in which the land between the mountains and the ocean was different in the South from that in the North. In the South the plain was lower and wider and the soil was richer.

Climate in New England

But there was a third fact of geography that made one region of the plain different from another. That was the climate. As you know, "climate" means three things: temperature, moisture (that is, rainfall and dampness), and winds. But these depend especially on location on the earth, the latitude in which a region is located.

The first settlements extended from Georgia, about 32° north latitude, to Maine, about 48° north latitude. Now the northern part of New England and the southern part of Georgia are 1000 miles apart. Since one is so much farther north than the other, there is, of course, a great difference in climate between the two.

In most of New England, located from about 42° to about 45° north latitude, the temperature in spring and autumn is cool. For short periods in July and August it is very hot, but the average temperature in the summer is only about 70 degrees. During the winter it falls, however, and remains about freezing — 30 to 35 degrees. In Massachusetts and Connecticut there are some very cold weeks, with a few days below



MAP 10. This map shows the rainfall and the temperature in winter and summer in several of the principal regions of our country

zero, and in northern New Hampshire, Vermont, and Maine the temperature sometimes falls as low as 40 degrees below zero.

The winter temperature meant, therefore, that in New England the people had to build houses which would protect them from the cold. For this they used the many stones from their land, and they cut down trees and made heavy timbers. Their houses had large fireplaces in which huge logs were burned to keep the family warm. When they began to use coal, they dug cellars under their houses and put in coal-burning heaters.

The rainfall in the North is also different from that in the South. Much of New England gets an average of from 40 to 60 inches a year. This is a generous amount of rain, about midway between the 10 to 20 inches of the sandy desert and the heavy rainfall of the tropical lands (80 to 100 inches). All of this rainfall does not come at one time, but is well scattered throughout the year. The people of New England have no need to irrigate their land.

We can see, therefore, that the New England people had enough rainfall and a fairly good growing season. But their soil was rocky and gravelly and their winters were long and cold. Thus they had to be satisfied with small farms on which they could raise vegetables, fruits, and small amounts of corn and other crops. It was only by hard work that they made a living.

The Climate of the Middle Region

As you would expect from the location of the middle region, which includes New York, New Jersey, Pennsylvania, Delaware, and Maryland, the climate was somewhat milder than that in the North. Even in the middle region, however, the temperature often fell below zero in winter, and the summers were very hot and moist. In the main, the average temperature ranged from 70 to 75 degrees in the summer and from 30 to 50 degrees in the winter. The rainfall was from 40 to 60 inches a year. We see, then, that nature was more favorable to the farming settlers of the middle section than to those of New England.

The Climate of the Southern Region

The southern part of the plain — Virginia to Georgia — had a warmer temperature and a somewhat heavier rainfall than did the northern and middle regions. The very first colonists in Virginia found a temperature that ranged from 75 to 80 degrees in the summer and from 45 to 50 degrees in the winter. The rivers almost never froze. The rainfall in no part of the region was less than from 40 to 60 inches a year and in some places it was even heavier. Hence the farms became large, and subtropical crops, such as rice and cotton, could be grown.

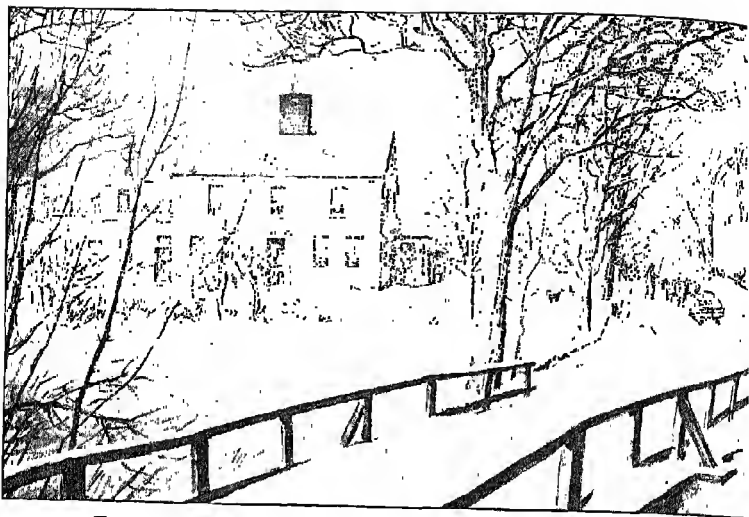


FIG. 46. A New England farmhouse in winter. What does the picture tell you about the climate of that region?

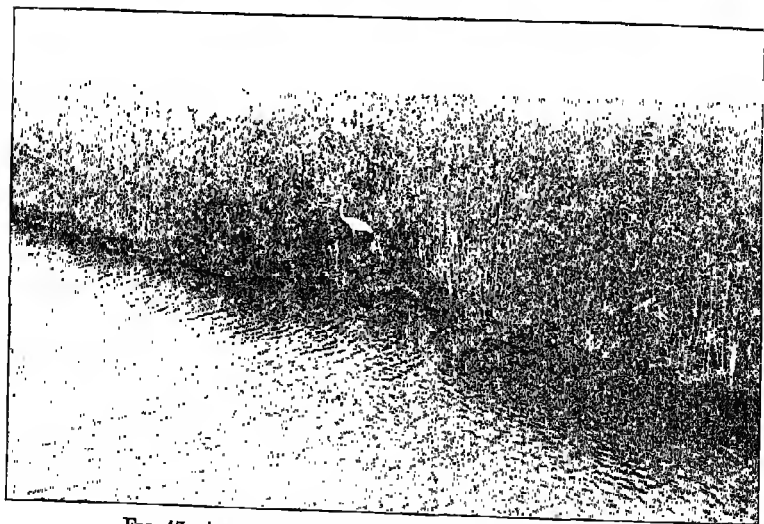


FIG. 47. A scene on a canal in the Everglades of Florida

Ewing Galloway

We have seen that ways of living in the North were different from those in the South. We saw also that some of these differences were made by the climate, by the height of the land, and by the soil. Thus we see how geography played a very important part in the lives of the early settlers of the Atlantic coast.

This, then, was the east coast of the United States in the 1600's and 1700's. On the whole, Nature gave a kindly greeting to the English and other settlers who came to these shores. In most places she provided good soil and a mild climate and fairly level land.

She also gave to these newcomers from Europe a beautiful countryside. You know from *Peoples and Countries* that the British Isles have some of the most beautiful landscapes in the world. But in the hills and valleys and plains of the eastern "seaboard" there were scenes just as lovely. The mountains and valleys were green with forests. Many rivers and brooks flowed through the land, winding their way to the shore. Nature was, indeed, at her best.

The whole plain was also a good example of the north temperate zone. It was a mild land, ready for people who knew how to cultivate the soil and to build permanent homes upon it. It was ready for Man to build his new American civilization.

Books You Would Like To Read

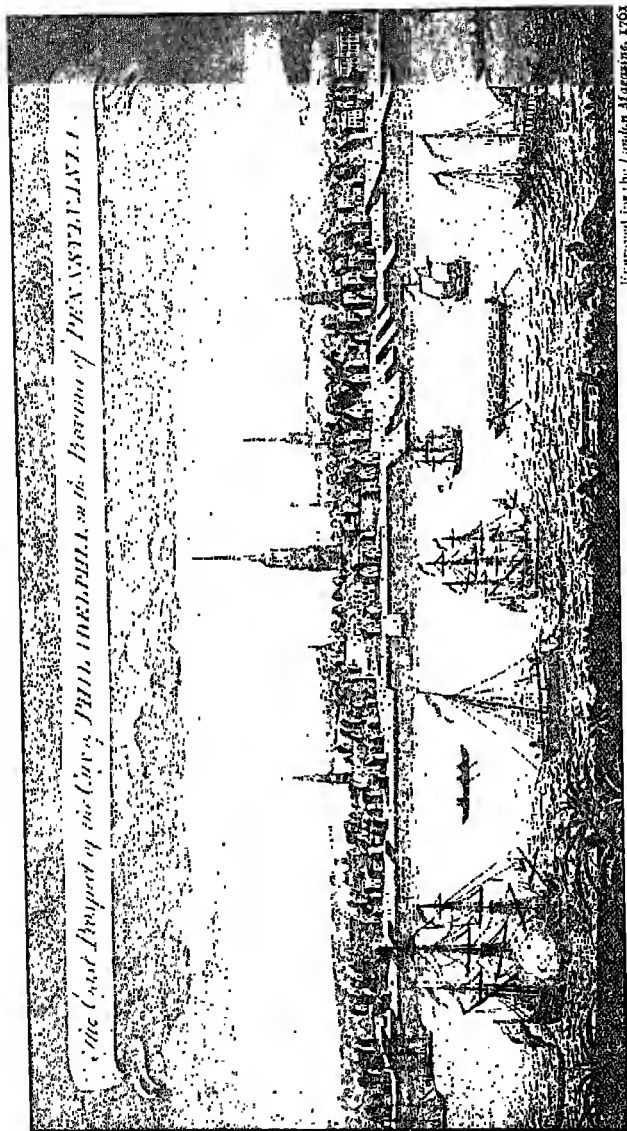
ALLEN, N. B. United States. Ginn and Company, Boston. A geographical and industrial reader.

CHAMBERLAIN, J. F., and CHAMBERLAIN, A. H. North America. The Macmillan Company, New York. An excellent geographical reader.

JORDAN, D. S., and CATHER, MRS. K. D. North America (High Lights of Geography). World Book Company, Yonkers, New York, 1925. See pages 13-21, "The Appalachian Mountains"; pages 117-124, "America's Great Swamps"; and Chapter VI, "American Waterways: A Story of Rivers."

PART III

The Westward Movement Continues



Engraved for the London Magazine, 1761

FIG. 48. A view of Philadelphia in its early days. While settlers were pushing farther westward, towns like Philadelphia were growing into cities

CHAPTER IX

The Westward Movement Starts across the Appalachians

Can You See the Colonies along the Seacoast?

THINK NOW of the time of the 1770's and 1780's. A hundred and fifty years have passed since the first daring Puritans landed at Massachusetts Bay . . . a century and a half since the English squires started their Virginia plantations.

Do you see the large estates in the sunny South? the green fields and the busy port cities of the middle colonies? the rocky farms, the little farming and fishing villages, and the growing port towns of New England? Can you imagine yourself back in that life of 150 years ago?

During all that century and a half most of the settlers had stayed near the coast, perhaps somewhat afraid to enter the great unknown land beyond. Or perhaps they felt they might be too weak to meet the dangers which they knew would be there. At last, however, they follow the hunters and traders and begin to feel their way toward the "backwoods."

The coastal plain is filled with people. More and

more everyone sees that there is little chance for a poor man or a newcomer to make his way there. He will do better to go west beyond the frontier, as we call the edge of the settlements. There he can take up some new land, clear it, and build a home. Now even the mountains can no longer stop those who wish to settle beyond.

Imagine that it is after 1770 and we are traveling from a busy town on the sea. Just away from the coast we find small farms. Farther inland are little log cabins where the settlers are only beginning to clear the land for fields. If we are daring enough to go still farther on, we come to the great untouched forests where the only white men are hunters and traders. But to reach this land we must cross the Appalachian Mountains.

Let us go over the Appalachians from the coast with one of these pioneers. We shall see through his eyes what was happening in those years 150 years ago.

1772: A Pioneer Leaves His Home in Maryland

From Cumberland, Maryland, north to the western Pennsylvania country, ran Braddock's Road. Through the woods and along the valleys it wound. In April of the year 1772 a single rider was passing along this road. He was a tall, thin man about 30 years old,

with strong and hard muscles. As he rode along he began to notice landmarks that he had seen before. This was not his first visit to the region of the Monongahela River. Twenty years before he had been a boy in this wilderness, and he was now returning to it to build a home of his own.

William Martin — for that was the man's name — fell to thinking about what had happened in those days. He thought of the months when Major George Washington and his men had been defeated by the French and the Indians. In the following year the English general Braddock and his soldiers had been defeated in that very region.

The French had certainly driven the English out of that country. Most of the men had been killed in the fighting. The women and children too were either killed or captured. Martin's own father had been shot by a bullet from an Indian rifle. Martin remembered how he himself had fled that night with another family.

But now all that country belonged to the British again. They had built Fort Pitt at "The Point," where the two rivers, the Monongahela and the Allegheny, joined to form the Ohio. And now, with thousands of other restless pioneers, Martin was going back. The pioneers always went back. If you had been brought up in the wilderness, it always called to you. You could not live in a settled community.

Then Martin began to think about the family he had left back in Hagerstown, Maryland. There were his wife and two children, John and Ann. He hoped that they would get a good crop this year. Then there would be food to bring over the mountains with them when he went back to get them in the fall. It seemed a long time until fall. Oh, well, a new life was ahead, and he would have many things to do in this place, which was being settled again by the English. In the wilderness he would be busy building a home.

At the end of Braddock's Road, Martin found, as he had been told he would, a new road cut through to Redstone Old Fort. He remembered having gone with his father to that trading post, so he knew the way. On and on he rode.

At seven o'clock in the evening, before the spring twilight had faded, Martin suddenly heard the sound of a fiddle. Someone was playing gay dance music. In a moment he saw a building ahead. He had reached the post.

Taking the saddle from his tired horse, Martin led him to the creek for water and then turned him loose. In front of the fort he called loudly. At last he made himself heard above the laughter and shouting. Two or three men, a little gay from drinking, came out to welcome him. They invited him to come into the fort. In a large, rough room fifteen or twenty men



FIG. 49. William Martin arriving at Redstone Old Fort

Rodney Thomson

were having a dance at which only the men could be present. Martin joined them. Until late that night he sat up with them dancing and telling and listening to stories.

The next morning Martin had a chance to look at the fort. Here were cabins, blockhouses, and high-walled stockades to protect the settlers against the Indians. Fences of logs separated the cabins. Rough dwellings they certainly were, with dirt floors and thatched roofs and mud walls.

William Martin's first desire was to get some land on which to build his new house.

"Land's to be had for the taking," he was told. "With a cabin and a crop you can have 400 acres and the right of 1000 acres more. All you have to do now is to choose your place and get a 'tomahawk right' to it."

Martin knew what that meant, so he went farther back on the hill and found a spot that he thought would do for his farm. He marked with his tomahawk some of the trees on the spot that he wanted. This was the tomahawk right. It gave him the right to own the land.

Near by a spring flowed from the midst of some rocks. "Looks like it would give us enough water," he thought to himself. Around him on three sides the ground rose

gently, leaving a large level space in the middle. On that he would build his cabin.

During the next few weeks Martin was busy cutting down trees, making them into logs, and building. The few other men in the neighborhood helped him, and soon the cabin was finished. It was not much better than the hut he had lived in as a boy, except that it was somewhat larger. The sides and the roof were of rough logs with a heavy door at the front. A small window covered with oiled paper let in a dim light. Next to the cabin, Martin built a rough shack in which to store corn and keep his horse.

When Martin had finished the cabin, he began to clear the ground around the house. From several acres of ground he cut the trees two or three feet above the roots. Then he plowed the clearing with a crude hand plow which he had borrowed. When the ground was ready he planted the Indian corn. After this was done he did not have much to do but watch the crop and go hunting and fishing.

At the end of September, when the corn was gathered, Martin went back to Maryland for his wife and children. They had raised a crop on their little farm, and so had Indian meal ready to bring with them. This time the trip was made in a rough wagon, since there were four people and all their household goods.



Rodney Thomson]

FIG. 50. William Martin and his family in their frontier cabin.
Do you see how many kinds of work there are to do?

One rainy day of the following March, William Martin and his family were all together in their new cabin. William was pounding a skin with a wooden hammer on a block of wood, for all the settlers made their own leather for moccasins and rough shoes in this way. His wife sat at a loom weaving a piece of linsey, the only material that was used for clothing. Linsey was made of wool and flax and was strong enough to resist the hard wear it would get.

The children looked thin and pale; for the corn was getting low, and they could have very little johnny-cake or mush. For the most part they lived on venison (deer meat), wild turkeys, and bear meat. Today, however, they were going to have a johnny-cake, and the children were turning the hand mill to grind the corn. This mill was made of two heavy stones, one on top of the other. The children soon found it too heavy for them to turn, and their mother now began.

John went to the window and looked out. "Ann, let's go down and see the train of horses that is coming today with supplies."

Ann was eager to go, so the children rushed out and down the road.

"I'm worried about the children," said the mother, after they had gone. "They're so thin and pale."

"Never mind," William answered. "If we can pull through a little longer, we'll be all right. I'm going to

plant a garden this year and raise some wheat and rye as well as corn."

The children ran quickly, hoping that they would not be too late to see the train of horses. No, it had not come. Several men were still standing about, waiting.

Before long, however, something was moving down the road. Soon the children could see the horses clearly, fifteen of them tied together in single file, with packs on their backs. One man walked beside the first horse, and another beside the last one.

As they came up someone called to them, "How's Hagerstown?"

"All right when we left there," the leader of the train replied.

The children knew that a plow was being brought for their father, and they hoped that they would all have more to eat this year than last. Life on the Monongahela frontier was very hard in the 1770's. And each settler in his lonely cabin worked for the coming years, hoping that his children would have the things which he had missed.

Nearly 30 years passed. The Martins' cabin gave way to a frame house of straight, painted boards. Other families moved in, took up land, and made farms. Slowly a little village grew around them. Ann Martin

grew too. She grew to be a young lady and then became Mrs. Ford. By 1800 she also had a family.

Later we shall read more of what happened in the village of the Martins.

Other Pioneers Begin To Conquer the West

The story of the Martins shows how one pioneer family went West and staked out a new home in the wilderness. It is also the story of thousands of other families. Of course during those earliest years, the 1770's and 1780's, only a few dared to face the dangers of the mountain forests. But after these few got through safely and succeeded in laying out farms, messages went back by returning travelers to the villages and towns of the Atlantic plain:

"Come out and join us! . . . Land is fine and free for the taking. . . . Come out to 'Ohio' and 'Kentucky' and help to build America! . . . Come quickly and get some of the best land!"

Then thousands of the restless farmers and mechanics of New England and New York, Pennsylvania and Maryland, Virginia and the Carolinas, answered the call. They packed up their few belongings and started across the mountains. In Chapter X we shall see how they traveled on these westward trails.

Books You Would Like To Read

See the titles at the end of Chapter X.

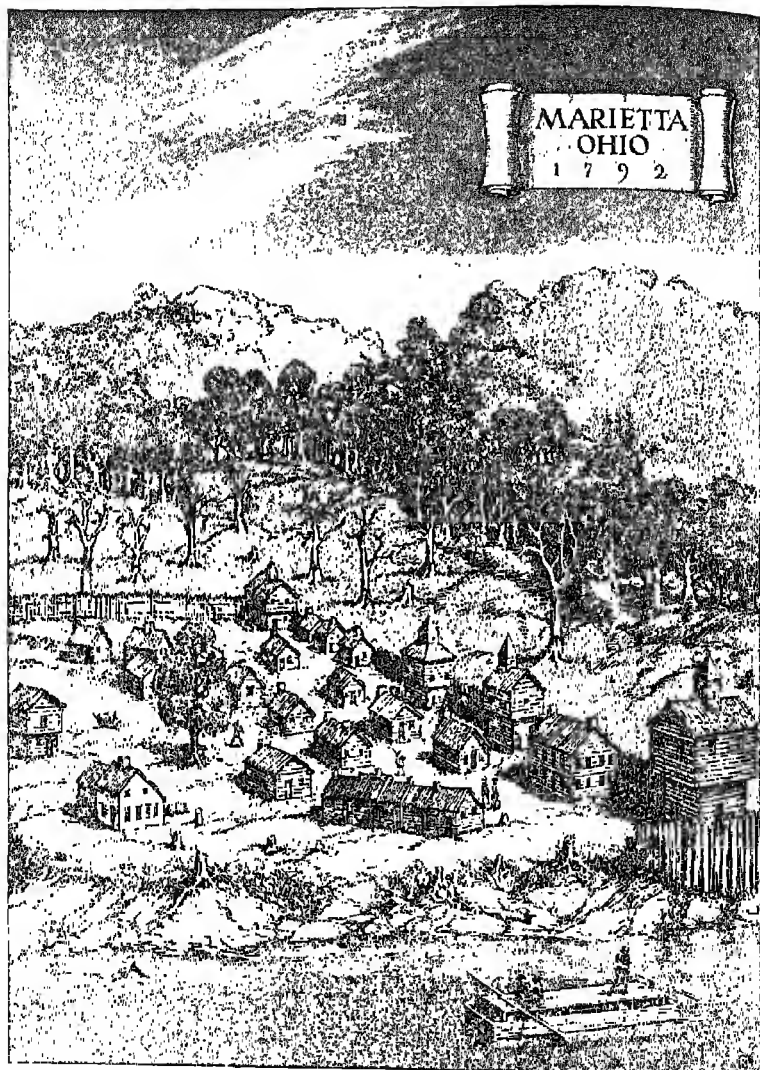


FIG. 51. Do you think it was easy to defend the frontier village of Marietta?

Robert Lawson

CHAPTER X

Traveling on the Westward Trails

LET US imagine that we are living on the coast of New Jersey in the days of our great-great-great grandfathers. The War of the Revolution is over, and our father and mother and older relatives are talking together about "going West." Uncle John has just sent back a letter from the new village of Marietta, on the Ohio River, (figure 51), urging us to come. He says there is much land to be had, and we can build a farm. For many months our people have been talking about it, but now it is decided that we go.

Where Could the Appalachian Mountains Be Crossed?

The next important question comes up: By which route shall we go?

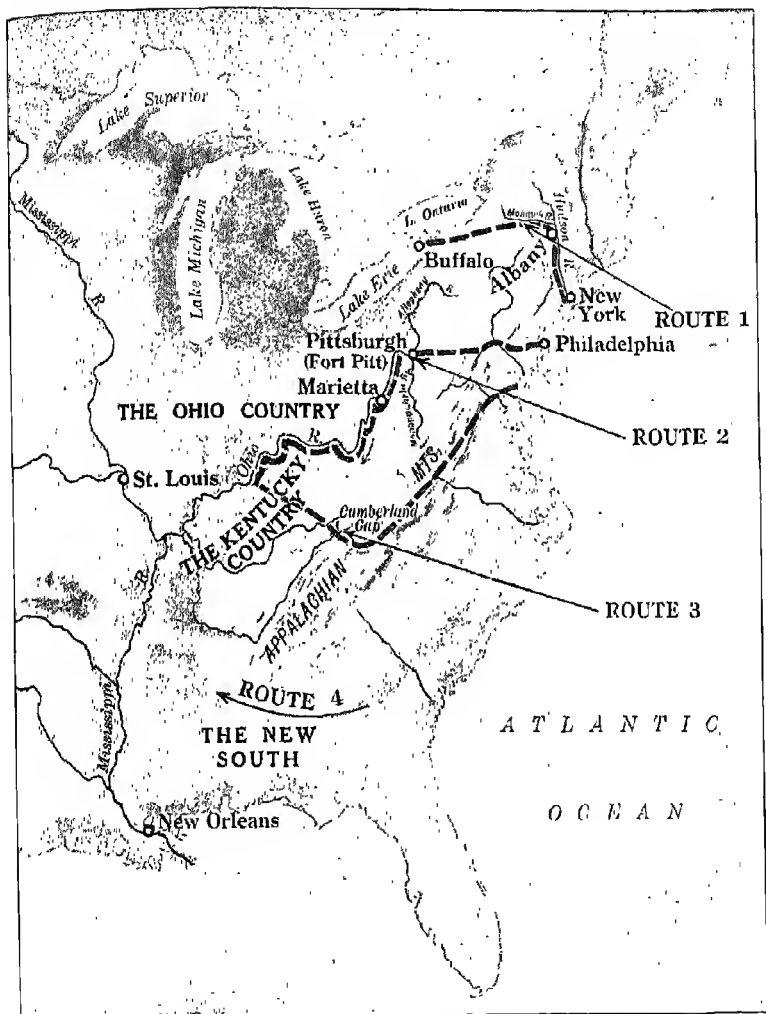
Ohio is many miles away, across the Atlantic plain and over the Appalachian Mountains. We study the rough map which Uncle John has sent us. It is somewhat like map 11, page 167, only it is not so well drawn as that map.

We notice that the Appalachians extend from New York State southwestward into Georgia and Alabama.

In most places these mountains are 2000 or 3000 feet high, but in others they rise to 5000 feet or more. But there are a few low places where travel will be easy. These are at a "pass," or "gap," in the mountain. The ways through each of them have been marked Route 1, Route 2, Route 3, Route 4, on map 11.

Route 1 is around the northern edge of the mountains and by way of a lowland route across New York State. By traveling on the roads along the Hudson River, we come to Albany. Then we follow the easy slopes of the Mohawk valley and turn southward along the shores of Lake Ontario and Lake Erie. By this route we can avoid most of the mountains. The distance is greater than the routes across the mountains, but traveling is much easier.

Route 2 runs through the river valleys of Pennsylvania to the hills near the mountains. Then, by paths and rough roadways, it climbs higher and higher. Steeper and steeper, more and more winding, becomes the trail. Finally it goes through the pass at the top. Then it leads downward on the west side of the mountain. This time it follows a stream which flows into the Monongahela. On and on goes the trail; lower and lower it becomes. At last the Monongahela meets another large river, the Allegheny, at a sharp point of land. This is the famous "Point" where the two rivers join to form the great Ohio. We shall read



MAP 11. The four principal routes from the Atlantic seaboard to the West used by our forefathers. Which route do you think they used to cross the mountains from different parts of the Atlantic plain?

much about that river in our study of American history. At this time in our story it is the end of Route 2.

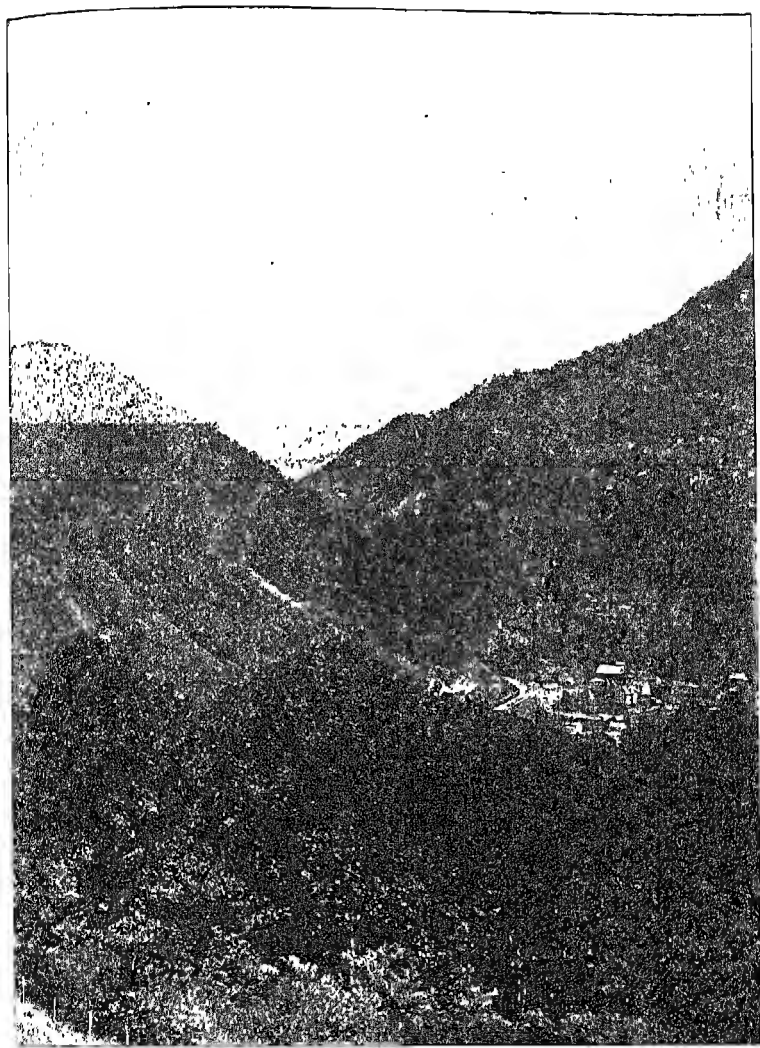
Route 3, through the Cumberland Gap, is as well known as the others (figure 52). In a moment we shall read how the famous trail-maker Daniel Boone cut a path through this low place in the mountains many years before. Later this trail became the Wilderness Road.

Route 4 is the path around the southern end of the Appalachian Mountains. In order to get to the "West" by this route we must travel nearly 1000 miles along the Atlantic Coastal Plain. If one is going into the new southern frontier, — Alabama and Mississippi, — this is the way to go; but if one is going into the central plains of the north, it is out of the way.

Which route should we take to go from New Jersey to Marietta, Ohio? If we go through the mountains to "Kentucky," we shall travel by Route 3 through Cumberland Gap. But if we wish to go to Pittsburgh and then down the Ohio River, Route 2 is the best. We have the choice of four ways to get to the "West."

Through Cumberland Gap Went the Wilderness Road

As early as 1770, hunters and trappers had found the pass in the mountains which later became known as Cumberland Gap. Through this gap they crossed



© Canfield and Strook

FIG. 52. The Cumberland Gap forms a natural pass through the Appalachians. Here the old Wilderness Road wound its way

the mountains into Kentucky, the wilderness beyond. With their return, people living in North Carolina and Virginia began to hear of the good farming land of Kentucky. Many of them decided to go there and build new farms.

In order to move themselves and their belongings, however, they had to have a road which would be broad enough and smooth enough for carts and wagons. Now to make even a trail through that rough mountain forest was no easy task. In some places the land was steep and rocky; in others it was marshy. In still other places one had to creep through bushes for days at a time. Until a wide trail was cut, not even horses could pass. You can see that people could not hope to get through with wagons.

During these years Daniel Boone, whose home was in North Carolina, said that he would go ahead to find the best route. So he and his bravest hunters started out marking, or "blazing," the way by chopping deep notches in trees with axes (figure 53). The easiest route, of course, was along the valleys made by the rivers and smaller streams and through the gaps, or passes, between the mountain peaks.

Daniel Boone had lived in the forest all his life. He knew that the old Indian trails had been made along these natural pathways. One of the best known of these trails was called the Warrior's Path. Boone

and his party blazed their trail over the Warrior's Path for some distance through the mountains.

On the other side of the mountain they came to a fine level spot in Kentucky. There they planned a village. Not long afterward people followed the trail-blazers. They stopped and built a small settlement at this spot and named it Boonesboro after Daniel Boone.

This trail through the gap was the beginning of the Wilderness Road. It was also the beginning of westward road-building, which was to continue for 100 years from the Atlantic on the east to the Pacific on the west.

Trails Were Widened for New Travelers

Behind the trail-blazers came other men, chopping down small trees and bushes to make the trail wide enough for people to walk or to ride horseback or even to drive their cattle. Soon people began to pack up and start westward over the new trail.

Parties of men, women, and children would begin their journey along the muddy, narrow trails and cart-paths. Along the mountain valleys they went until they reached the last settlement on the east side of the mountains. There they waited until more people had gathered. There must be enough men with guns to make the dangerous trip together through the Cumberland Gap to Kentucky. The travelers must be protected from attacks by the Indians.



FIG. 53. As an artist imagines Daniel Boone blazing a trail

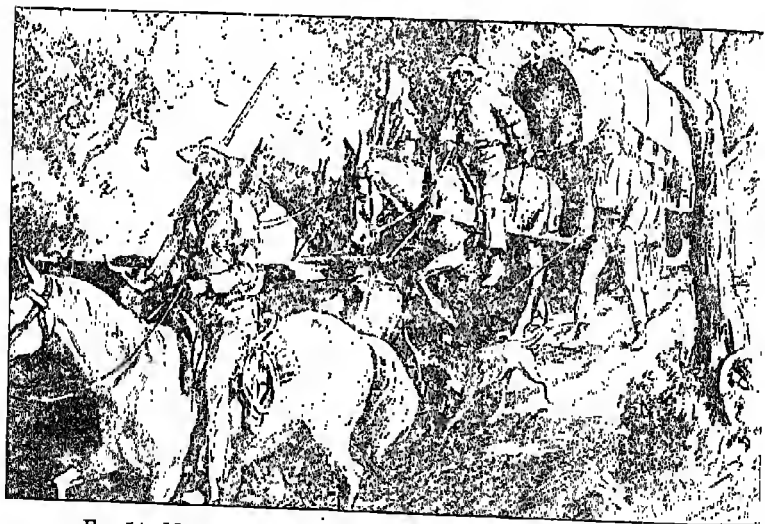


FIG. 54. Many families packed their belongings into wagons and traveled over the Appalachians to make new homes in the West

At last the long procession started. The men and the strong women and children went on foot. The old and the feeble rode on horseback. Pack horses loaded with goods, and herds of cattle, were in the long line as it moved westward. Over the ridges and along the trail it went. It was a hard journey that these settlers were beginning, full of unknown trials and dangers.

"Conestoga Wagons": A New Means of Travel

As the trails were widened into roads, wagons began to be used. These first roads were narrow and winding and always very rough. The wagons that could hold together after all the jolting and bumping on those roads were strong indeed. Two-wheeled carts were often used, as well as sleds. There were even horse barrows — three-wheeled vehicles like wheelbarrows, but drawn by a horse.

But the pioneer needed still larger and stronger wagons. They must carry his family as well as his belongings. Everything must be put into it: furniture, plows and other farming tools, barrels of water, flour, and food for his oxen as well as for his family.

A wagon known either as a "Conestoga wagon" or as a "prairie schooner" (see figure 54) proved to be the best vehicle for the pioneer. This wagon was named for a tribe of Indians living in the Conestoga valley, in Pennsylvania, and appeared first in that region about

1750. Its floor curved down in the middle, so that as the wagon rumbled along over the rough country, up hill and down, the goods would not tumble out. For some unknown reason the wagon was nearly always painted in the same bright colors. The under part of the body was blue, the upper woodwork red. With its white canvas top the wagon made a very colorful picture.

Often a single Conestoga wagon could be seen moving along over the plains and hills. At other times whole caravans of these red, white, and blue vehicles stretched out in a long, thin line as they made their way across the prairies and through the mountain passes. The deep ruts made by their wheels marked the way for other pioneers to follow. Indeed, the trail of the Conestoga wagons marked out the first paths for many of the important highways of today.

The Dangers and Trials of Traveling in Early Days

There are many stories which tell us how dangerous and tiring the journey across the mountains was in those days. Judge Hall, who took the trip after 1800, gives a picture of the struggles of the people. He says:

"It is not easy to describe the winding paths, the steep hills, the beautiful landscape, or the difficulty and danger of the roads. I found the roads crowded with people of every kind. Most of them were of the poorest class. Here I would meet a few fellows trudge-

ing merrily along; and there a family, less cheerful. Now a gang of 40 or 50 men, women, and children, and now a single walker, with his staff made of oak, his bottle, and his knapsack.

"At one time, beside a small stream rushing through a narrow valley, I met a party of about 80 persons, with two or three wagons. They had stopped to feed the horses; the animals were grazing among the rocks; the men cutting wood for fires, and branches to build a shelter for the hour. The women were cooking, or nursing their children, and the rosy boys and girls played in a waterfall. They seemed just like a gypsy band.

"At one of the hardest passes of the mountain I met a caravan from New England. The oldest of the party was a middle-aged man, well built and well dressed. He was leading a pair of small horses harnessed to a light wagon. The wagon held the bedding, the food, and a few articles of furniture. Two tall, barefoot boys in homespun shirts and trousers held the tail of the wagon. . . .

* "Behind them followed another family going with them. There were nine small children. A chubby boy of six years was wading knee-deep in mud, eating an apple.

"The two families had reached the top of the mountain just as I came up to them. As they stopped to rest, I checked my horse to watch them. As they

looked out over the view ahead they sat there in silent wonder.

"As far as the eye could see, there lay mountains and valleys and forests and rivers, all of which must be passed before these travelers could reach the land of promise. They looked back to what they had done; they looked forward, uncertain of what was to come.

"I thought I could see in their faces both hope and fear, but they spoke cheerfully. After answering their questions as to the route ahead, I left them. Tired people! By this time they have probably found a happy home in a land of plenty, surrounded with fat pigs and fat children."¹

Many other travelers have left stories for us to read. One tells of a family of eight — father, mother, and six children — who walked 1000 miles from their little village in Maine to Indiana. In a handcar they dragged their household goods.

Another man, a blacksmith, made his way in the cold of winter across Massachusetts to Albany, and then through the Mohawk valley into the West. He had made a little cart, into which he put two of his children, his food, and his clothing. Behind the cart walked his wife, with a little baby in her arms and with seven other children beside her. The father and a boy only twelve years old pulled the cart all the way!

¹ We have rewritten this account for children from Judge Hall's book.

Still another family of seven, with all their household things in wheelbarrows, walked all the way from New York to Ohio! Can you imagine such strength and such courage?

This, then, is the story of trails and traveling over the Appalachians 100 and more years ago. Could you see the geography of the land which the brave pioneers had to face? Who would not admire those adventurers who began the westward building of America?

But in 1790, 1800, 1810, and the following years the movement was just beginning. Year after year it went on. More and more people followed the widening roads through the valleys and over the mountains. Soon grain was waving in the fields of Ohio and Illinois and Indiana. Soon villages dotted the river banks and even farther inland. Towns began to grow up in various places.

The Great Central Plain was being settled. Let us look a bit more closely at that region and hear the story.

Books You Would Like To Read

- BARSTOW, C. L. (Ed.). *The Westward Movement*. D. Appleton-Century Company, Inc., New York. Excellent articles which were first published in the *Century Magazine* and *St. Nicholas*.
- BASS, FLORENCE. *Stories of Pioneer Life for Young Readers*. D. C. Heath and Company, Boston. How the early settlers traveled down the Ohio River, built their forts, and made new homes in the West. Also tells the story of Daniel Boone.

MEIGS, C. L. *The Willow Whistle*. The Macmillan Company, New York. A well-written story of the pioneers and their experiences with Indians.

PERRY, F. M., and BEEBE, KATHERINE. *Four American Pioneers*. American Book Co., New York. Stories of Daniel Boone, George Rogers Clark, David Crockett, Kit Carson.

SKINNER, C. L. *Becky Landers; Frontier Warrior*. The Macmillan Company, New York. Life of the pioneers in Kentucky during the years of Indian warfare. For the best readers.

SKINNER, C. L. *Rob Roy; the Frontier Twins*. The Macmillan Company, New York. Early days in Tennessee, with the twins having lots of adventures. For the best readers.

SKINNER, C. L. *Debby Barnes, Trader*. The Macmillan Company, New York. Pioneer days in Pennsylvania. The girl in the story hunts with Daniel Boone when he was a boy of fourteen. For the best readers.

CHAPTER XI

Geography and Settlement of the Great Central Plain

WHAT WAS this land into which these homemakers were moving so quickly?

It was the region stretching from the Appalachians to the foothills of the Rockies. Today we call it the Great Central Plain.

Look at map 4, pages 14-15, to see how well it is named.

First, it is called "central" because it is about half-way between the Atlantic and Pacific oceans.

Second, it is called "great" because it is nearly 1000 miles long and 1000 miles wide.

Third, it is called "plain" because the land in the entire region is fairly level.

As the pioneers floated down the rivers they looked out only here and there on high hills. If they tied their boats at the bank and started to walk away from the streams, they traveled day after day over long, flat stretches. In much of Illinois and Indiana, for example, as far as the eye could see, there was not a hill, just level ground mile after mile.

How the Great Central Plain Was Made

Perhaps you are thinking, "How could this large middle part of the continent be so level when on two sides there are rocky mountains?"

From our earlier studies we know that many millions of years ago mountains were formed when the earth cooled. Later other mountains were pushed above the rest of the earth's crust. We know also that in all those millions of years the winds and the rain and the snow helped to grind up much of the rocks of these mountains. The rocks became soil which piled up in the valleys and formed the plains between them.

The Central Plain Becomes a Garden Spot

The soil of the Great Central Plain of our country was much richer than that on each side of it. To understand why this is true we must think of the last Ice Age, about which we read in the *First Book of the Earth*, Chapter XVII. It might be a good thing to turn back to that book and reread the story, because we cannot take enough space here to tell it all over again.

The main point to remember is that many thousands of years ago (at least 20,000) it was very, very cold in our part of the earth. Huge glaciers of ice and snow like that of figure 55 formed on the northern part of our earth.



Photo by The Reverend Bernard R. Hubbard, S.I.

FIG. 55. The Indians called this "The End of the World." It is part of a larger glacier on the Canadian side of the coast mountains between Alaska and British Columbia. Many of the icebergs which have broken from it are the size of city blocks

They formed on the mountain sides. They formed in the valleys. As snow storm piled on snow storm these glaciers became deeper and deeper. Some of them were thousands of feet thick, and spread over long distances.

One of these glaciers formed over the northern part of North America. From the arctic region it spread over what is now Canada and over much of the northern part of the United States. In some places the ice was a mile thick and 2000 miles long.

After a long, long time the glacier began to move. On the steeper mountain sides, of course, it moved quickly. Sometimes huge pieces of ice and snow broke off from the main glacier and rushed down into the valley below. We say that there was an "avalanche." On the plains and in the valleys it moved very slowly — sometimes only a few feet a year.

For thousands and thousands of years this glacier moved; and as it moved, it changed the surface of the earth beneath it. Huge boulders and smaller rocks became frozen in the great mass of ice. Small stones, gravel, sand, trees, and other things were caught in the glacier too. As it moved along, the boulders and rocks and stones were moved along with it.

This mass of ice was very, very heavy, so it broke rocks and stones into finer and finer bits. It crushed and scraped and mixed the soil of a huge region.

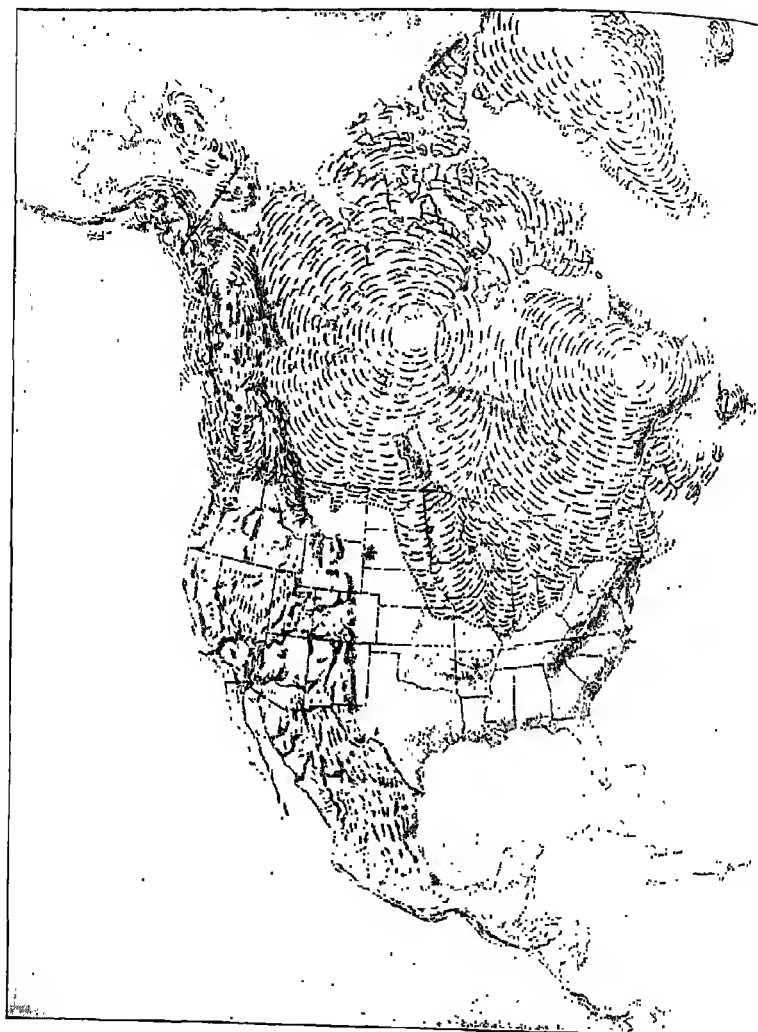
Then the temperature rose in this last Ice Age. The glaciers melted, and when the ice was gone the boulders and stones and gravel and sand and wood were left on the surface of the earth. Sometimes this mixture of things was left as low, rounded hills; sometimes, as broad, level fields. Even great boulders were left standing alone on a hill or in a valley. We know that these were left by glaciers, because they are like the rocks that were formed far, far away, and not like the stone and earth near them.

The "Black Earth" Region of Our Country

In your later studies you will learn much more about how glaciers changed the surface of the earth. But you can remember now that the great glacier of North America helped to make the rich soil of some of this central plain.

Map 12, page 184, shows that the glacier once extended as far south as Ohio, Illinois, Indiana, and Iowa. And the wonderful soil that the settlers found when they came down over the Appalachians was this very soil which the glacier had helped to make.

A rich dark brown it was in Ohio and Indiana; a heavy black in Illinois and Iowa. "Another black-earth region?" Yes, it is much like the plain of southern Russia, which you read about in *Peoples and Countries*.



MAP 12. The dotted lines show the vast area over which the ice sheet lay long, long ago. Can you tell what American states today are included in these lands?

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As you read on you will see what the settlers did to these millions of acres of rich and level land. The Great Central Plain became, indeed, the garden spot of our country.

The Mississippi River System Reaches the Entire Central Plain

Do you remember that the pioneers always looked for the rivers and the valleys to give them the easiest ways of traveling? In fact, in the early days these provided the ways of going west through the Great Central Plain.

On the map of Fig. 56 you can see how many rivers flow through that level land. There are so many that they form a system, that is, a large river with many smaller rivers flowing into it. The large river is the Mississippi, which, with the rivers flowing into it, forms the Mississippi River system.

You have already heard of some of the rivers of that large system. You know the Allegheny and the Monongahela, which flow swiftly out of the Appalachians and form the Ohio at Pittsburgh. Let us go down the Ohio. For more than 600 miles it flows along until it joins the Mississippi. This it does at the very southern end of Illinois, where the states of Illinois, Kentucky, and Missouri join.

Notice, next, the long river that rises in the west

and flows eastward into the Mississippi. This is the Missouri. It rises in the northwestern state of Montana and winds its long, long trail through North Dakota and South Dakota, by Nebraska and Kansas, and across Missouri. Then it pours its muddy waters into the Mississippi, just above the city of St. Louis.

Now look at the great Mississippi itself, one of the longest rivers in the world. It rises far in the north in the state of Minnesota and flows southward, forming the boundary between Wisconsin and Iowa and between Illinois and Iowa and Missouri. Larger and larger it grows as it moves along. Every few miles small streams flow into it, making it deeper and deeper, broader and broader. Near St. Louis, where the Missouri River joins it, the Mississippi is more than a mile wide. Then on it moves to the south. At the boundary of Arkansas it is joined by the Arkansas River; in Louisiana, by the Red River. At last it pours all the sediment, or mud, it has carried with it out into the Gulf of Mexico, making one of the large deltas of the world.

The Mississippi system extends more than 1500 miles east and west and more than 1000 miles north and south. Altogether nearly half the entire land of the United States is watered by it. Moreover, boats of fairly large size can sail upon the Mississippi, the

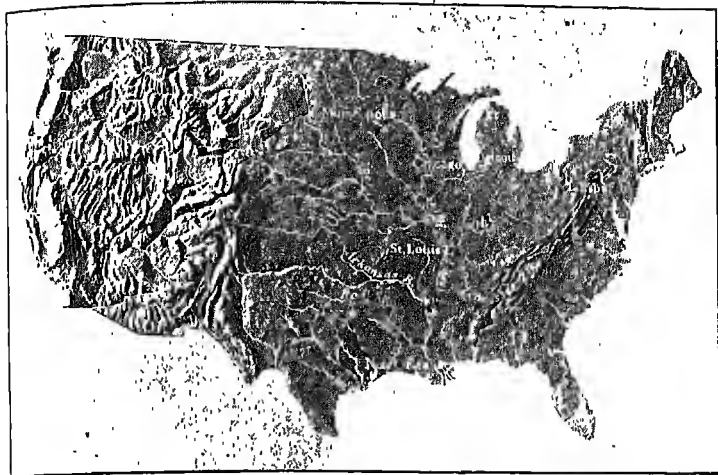


FIG. 56. The rivers that are lettered belong to the Mississippi River system. They drain the Great Central Plain of our country

Ohio, and the Missouri. So you can readily see that it was these rivers that gave the westward-moving settlers of 100 years ago their easy and cheap transportation.

The Ohio Valley Becomes the Easy Way to the West

Imagine yourself on the top of one of the high ranges of the Appalachians, looking westward across the plains. You are looking with a huge telescope across the plains, over the Ohio River, over the Mississippi and the Missouri, away to the foothills of the Rocky Mountains.

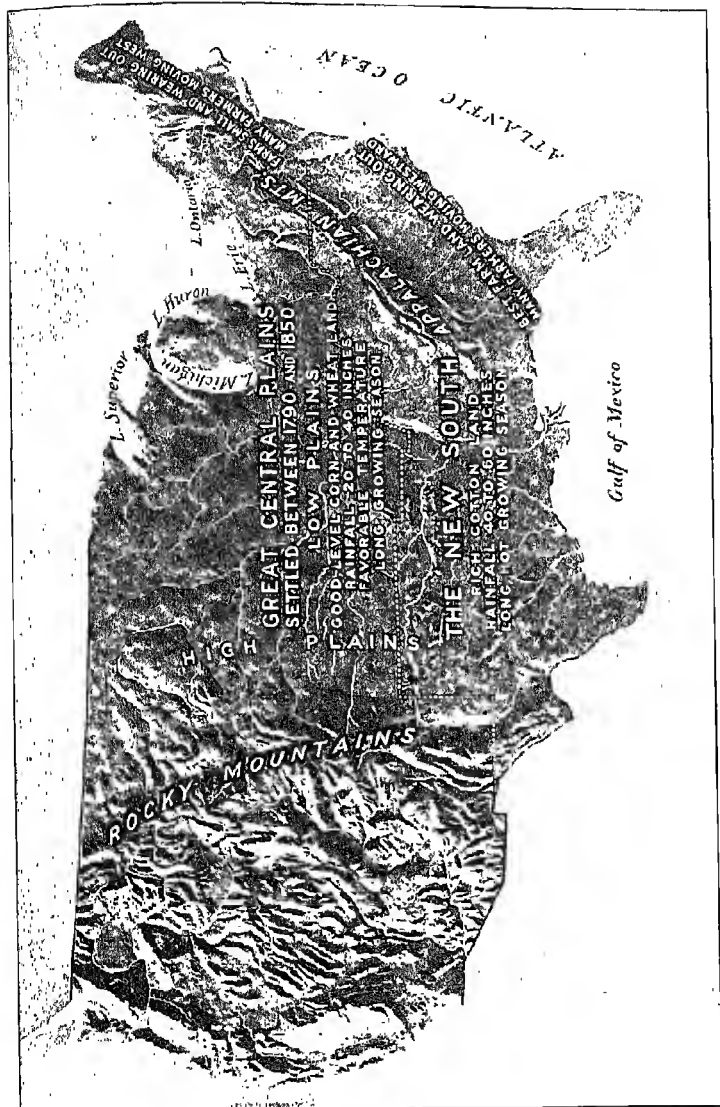
Now look carefully at the rivers. Do you see how

the Ohio River leads down from the Appalachians into the very heart of the central plain? Even by 1800 the settlers knew that here was the easy route to "the West." They could cross the passes in the mountains and follow down the valleys. If they came from the south, it was along the Monongahela; if they came from the north, it was along the Allegheny. That brought them to "The Point," where the two rivers joined to form the Ohio. Here they could get a boat and sail down the river.

Pittsburgh: A Town at the Gateway to the West

You know from *Communities of Men* how a settlement grew up on the point between the two rivers. The French had found it first 180 years ago and had built Fort Duquesne there. Then, four years later, the British soldiers had taken it. They built a new fort and named it Fort Pitt in honor of a famous English leader.

Of course settlers came but slowly at first. In 1788, forty years after Fort Pitt was built, there were only 376 people in the hamlet. Ten years later (1798) it was still a village. But it was growing; for by that time thousands of westward-bound settlers were passing through each year. Most of them wanted to go down the river and most of them wanted a boat. So it was that a large boat-building business grew up.



MAP 13. Settling the Great Central Plains, 1790-1850

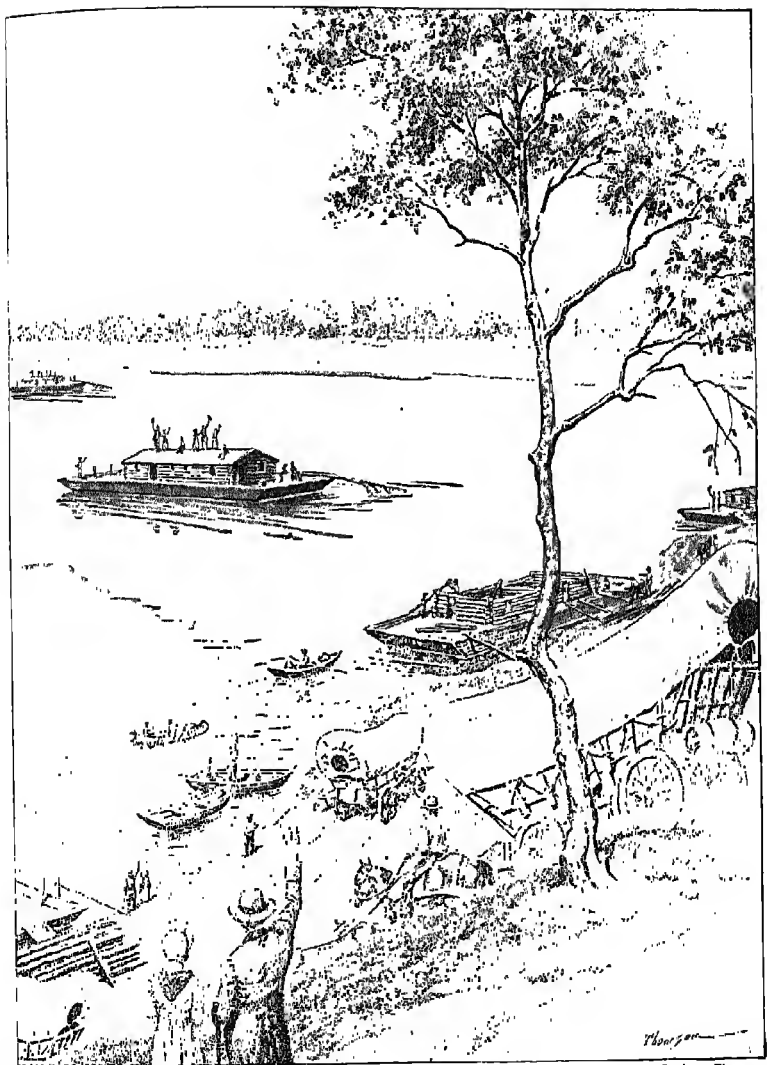
The Flatboat Era Begins

Up and down the rivers as far as you can see, men are building boats. There is every kind of boat! Canoes are being chopped out of huge logs. Big "pirogues," which can carry as much as fifteen barrels of salt at one time, are being hammered together. There are still larger boats, on which can be loaded hundreds of barrels of household goods, as well as people, horses, cows, and other things.

There are "arks" and "bateaux." There are "barges." There are keelboats with masts and sails. And there are still bigger "New Orleans" boats, so strong and well built that they can sail all the way down the Ohio into the Mississippi and all the way down the Mississippi to the Gulf of Mexico.

As more and more things from the East were shipped down the Ohio River to the new villages on the plains, larger boats came back from those villages and farms, loaded with animal skins, with cotton, tobacco, and sugar. Every day the docks of Pittsburgh were crowded with people watching the Mississippi boats as they arrived.

The large flatboats were perhaps the most popular means of travel on the Ohio. Often they were 20 feet wide and 100 feet long. What a funny mixture of



Rodney Thomson

FIG. 57. Settlers arrived at Pittsburgh in their Conestoga wagons and started on their way down the Ohio River on boats

things they were! One man said that a flatboat was a "log cabin, a fort, a floating barnyard, and a country grocery." In them, side by side, were men, women, children, horses, pigs, chickens, cows, dogs, kegs of powder, dishes, furniture, farm implements, tools, and weapons.

Year after year these boats crowded the Ohio River. It is said that between 1790 and 1820 more than 1,000,000 pioneers floated down the Ohio in search of better land in the wilderness.

The flatboatmen themselves were as interesting as their boats. Usually they were tall and strong, their faces tanned to a dark brown. The costume of a boatman was made up of a bright-red flannel shirt, a loose blue coat called a jerkin, and coarse brown trousers. On his head he wore a cap of skin; on his feet, leather moccasins. Around his waist was a leather belt from which hung a hunting knife and a bag to hold tobacco.

For days at a time the boatmen would be lazy, sitting on deck, sleeping and eating and telling stories. You can imagine the boats moving slowly along on a beautiful spring day. The air is warm and the sky is a clear blue. On the decks the passengers are dancing to the tune of a violin. As they come to a village the people come down to the water's edge to see them pass. At such a time the bugle, which every boat carries, is brought out. Its notes ring out up and down the river.

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But when the boats come to narrow and dangerous rapids the boatmen jump into action. With great strength they guide the boat in and out among the sharp rocks. Now the boatman is an entirely different man. Shouting commands to his men, he becomes, as one writer said, a "rubber ball, wildcat, and shrieking madman," all rolled into one.

Soon the danger is past. Out from the rapids moves the boat to the broad, calm river. Then the boatman settles down, laughing and talking as before.

All is quiet again as the flatboat drifts along with the current. Down the Ohio to the Mississippi it goes; down the Mississippi to New Orleans. So moves the line of traders and settlers bound for the West.

The "Frontier"

Many times in this and other books you will read of the frontier. Do you know what that is? Government reports say that it is any region where there are fewer than two people living on each square mile. Imagine going through the woods or over the open plains for many, many miles and seeing only a lone house or two. That would be the "frontier." If one went on and on, mile after mile, through forest and did not see any people at all, that would be the "wilderness."

The frontier, then, was the last settlement on the edge of the wilderness.

How the Settlers Lived on the Frontiers

We who live today in the towns and cities of the United States can understand but little of how our great-great-great-grandfathers lived when they built their cabins in the wilderness.

Danger surrounded the children, as well as the grown-ups, on every side. Often Indians would hide among the trees, waiting for a chance to carry off the children or to add a young scalp to their hunting belts. The anxious mother working in the log-cabin home never knew when her husband or her son would be brought down by an arrow or a tomahawk. He might also be bitten by a poisonous snake or have his bones broken from falling trees or from a tumble over a steep cliff.

Nor were there doctors near at hand who could be called over the telephone in those pioneer days. The nearest doctor was perhaps 100 miles away — two days' hard riding on horseback! Even when he came he could perhaps do no more than the frontier mother had already done to save her loved one.

The health of many of the people was almost sure to be bad. Nearly everybody had rheumatism or malaria or some such disease, because the settlers always built their farm homes in the low, swampy lands along the rivers.



Harold Sienel

FIG. 58. Can you see from this picture that it took courage and strength to live on the frontier?

Even the games which the children played showed how much the wild life around them was a part of their lives. They learned woodcraft and the use of the Indian tomahawk. It took years of practice, but often they could send the tomahawk spinning through the air and hit an object with the blade. When a boy could shoot his father's long, heavy rifle he was proud indeed, even though he had to set the rifle up on a forked stick in the ground because it was too heavy for him to hold. Wrestling too was a favorite sport in those days, and there was much running and jumping in the woods.

Do you know the bird calls or the calls of the animals of the forest? The frontier boy learned these just as you learn to read and spell. That was part of his "common-school education." He had to be able to coax turkeys to come within reach of his rifle by imitating the calls of their mates. And later, like his father, he found out where the wolf pack was by imitating the howls of wolves.

What about the homes of those days? "Home" was a cabin — a little building perhaps 16 feet wide and 20 feet long. It was made of heavy logs from the trees that were cut down to make the "clearing." The logs were notched together; no iron nails or spikes were at hand to fasten them. The first settlers in America had almost no metal. Often the earth served

as a hard, flat floor. Sometimes a floor was made with thick, rough planks which were cut from logs and laid down over cross logs. These were held in place by wooden pins. The house had only one door, which was made of heavy planks and fastened on leather hinges. It was often swung in two sections, an upper and a lower. No unwelcome stranger could enter when the lower section was closed.

Of course there was no glass, so what do you think was used for windowpanes? Greased paper! One could not see through it, but it did let in some light. The danger from Indian attack was so great that often no windows were made.

The furniture in the cabin, like the rest of frontier things, was homemade. The table from which the family ate their food was a smooth board set on four posts. Chairs and three-legged stools were made to match. Animal skins and rough-woven blankets were laid on the floor for beds. As years passed, bedsteads were made by laying rough boards across logs, with legs made of other large sticks. Nor were there soft mattresses. For a long time mattresses made of plain straw were thought to be a real luxury.

When the farmer sat down at the welcome call of "supper" after a hard day's work, he ate from wooden plates with wooden spoons and used wooden cups and bowls. He had been glad to find time in the long

winter evenings to whittle these out of logs and boards. His cold drink was often taken from a gourd. Cooking utensils matched the serving dishes, although there were generally a few iron kettles and knives. These, of course, were absolutely necessary, and you can imagine how carefully the farmer guarded them as he traveled the Western trails. Iron was hard to get. In those days one could not go to a hardware store and buy a new ax when the old one was lost or broken. The loss of an iron tool was a misfortune on the frontier.

So it was that ways of living on the frontier of the Ohio valley were much the same as they had been 100 years before in Massachusetts or in the "back country" of Virginia. From 1600 to 1900 it was much the same on every frontier, that is, simple, rough, and generally dangerous. But one advantage the frontier did have: life there was independent. The man who cleared the forest and built his own log shack was forced to stand on his own feet. He was "self-sufficient," depending on himself, but he felt that he was free.

Each Year the Line of Settlement Moved Westward across the Plains

So it was that between 1790 and the years of the 1850's, 1860's, and 1870's the frontier moved ever westward. It advanced about 30 miles a year. A

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brave settler could go out into the forest, cut down the trees in the clearing, build himself a house, and plant corn and vegetables. Then another man would come along, pass him, and go on beyond. He too would clear a place in the forest, put up a log cabin, and plant a few acres. Then he would bring his wife and children to the place and settle down to make a new home. Perhaps only a few months or even a few weeks would go by before other settlers would come. Finding the land taken, they would move on still farther west.

Then some of the older settlers would become restless and would want to pack up and move on. They would hear stories that the "land over yonder" was more level, was easier to cultivate, would grow better crops than their own. So time after time it happened that, as new pioneers came, many of those who already had farms sold out their places to these newcomers, packed up, and moved still farther west.

The Great Central Plain Becomes Filled with People

The westward movement went on. More and more people came across the Appalachians and began to fill up the Ohio valley. Then they pushed farther and farther west until they had crossed the Mississippi. Soon they began to move north and south and settle in the great Mississippi Valley.

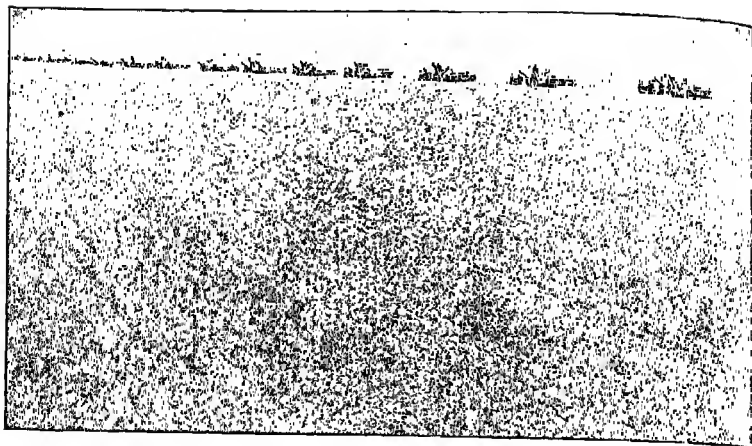


FIG. 59. The pictures on this page show the level land of the Great Central Plain. Here is a wheat field in Kansas as it is today

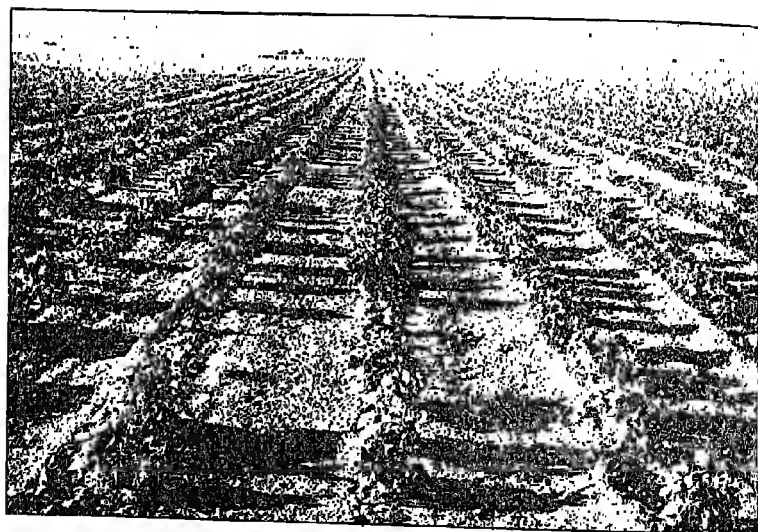


FIG. 60. This bean field in the eastern part of the level Colorado plateau stretches far into the distance

Ewing Galloway

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So many people came to make homes in the land beyond the mountains that there were soon enough to form new "states." They joined the first thirteen, which had become the United States of America. When the number of people living in a new region becomes large enough to form and keep up a state government they can ask to have that region admitted to the United States as a state.

Even by 1792 more than 60,000 people had followed Daniel Boone into Kentucky, and Kentucky became the fifteenth state.

Four years later (1796) the land just to the south of Kentucky joined the Union as "Tennessee." So swiftly did farms and villages spring up that in less than 25 years there were several other states: Ohio, 1803; Indiana, 1816; Illinois, 1818.

As you will read in the next chapter, the pioneers were going westward in the Far South too. As early as 1812 there were enough people in Louisiana so that it became a state. In 1817 Mississippi and in 1819 Alabama followed it into the Union.

When Wisconsin joined in 1848, all the land east of the Mississippi River was divided into states. Even the land to the west of the river was a part of the United States of America. Soon we shall read the story of how that frontier crossed the Mississippi and moved over the prairies and the western mountains.

Books You Would Like To Read

- ALLEN, N. B. United States. Ginn and Company, Boston. A good geographical and industrial reader.
- BRINK, C. R. Caddie Woodlawn, a Frontier Story. The Macmillan Company, New York. Exciting times in frontier Wisconsin.
- CATHERWOOD, M. H. Rocky Fork. Lothrop, Lee & Shepard Company, Boston. How a little girl lived in Ohio years ago.
- CHAMBERLAIN, J. F., and CHAMBERLAIN, A. H. North America. The Macmillan Company, New York. An excellent geographical reader.
- EVERSON, F. M., and POWER, E. L. Early Days in Ohio; a Story of a Pioneer Family of the Western Reserve. E. P. Dutton & Co., Inc., New York. A family goes to settle in the Western Reserve.
- JORDAN, D. S., and CATHER, MRS. K. D. North America (High Lights of Geography). World Book Company, Yonkers, New York. See Chapter IV, "A Story of Glaciers."
- MCMURRY, C. A. Pioneers of the Mississippi Valley. The Macmillan Company, New York. Stories of La Salle, Joliet, De Soto, George Rogers Clark, and others.
- NATHAN, MRS. A. G. The Farmer Sows His Wheat. Minton, Balch & Co., New York. An excellently illustrated story of the growing of wheat in America from the earliest times.
- PHELAN, MARGARET S. G. Candlelight Tales (one of Our Changing World Series). Thomas Nelson & Sons, New York. How the pioneers got their food, their clothing, and the like. Life on the frontier.
- WILDER, MRS. L. Little House in the Big Woods. Harper & Brothers, New York. The life of the pioneers in Wisconsin 60 years ago.

CHAPTER XII

The Settlement of the New South

IF YOU had been living in Virginia or south of it in 1790 or 1800 and wanted to go West, which way would you have traveled? Where would there be the fewest hills? By way of Route 4, of course. That was the easiest way — along the Atlantic Coastal Plain and around the foothills of the Appalachian Mountains in Alabama and Georgia. From there you could go westward toward the Mississippi. That was the route taken by the Southern pioneers who went West. It was the way that nature decided where the trails should run. Where the trails were blazed, there a little later rough roadways were built.

Why did the Southern planters want to go West? For the same reason that their Northern brothers had packed up and moved across the mountains to Ohio. They wanted to find "the better land over yonder." The stories that were brought back to the plantations of Virginia and Georgia told that there was much better land in the millions of acres that lay ready to be taken.

From map 4, pages 14-15, you can see that the

great plain of which we have spoken not only extends across the northern part of our country but lies on both sides of the Mississippi River all the way to the Gulf of Mexico. This land is low and fairly level, like the region in the north.

Indians had lived for many, many years on this land; but when the hunters, the traders, and the trail-blazers went into it, they pushed the Indians back little by little until finally they crossed the "Father of Waters" (the Mississippi) itself.

So during the very years that the people from Kentucky and Pennsylvania were moving into the central plain, their neighbors in Virginia and the Carolinas were moving southwestward. Some of these were poor farmers, much like those we have read of in the North; but others were the families of Southern gentlemen whose great-grandfathers had owned the large plantations in Virginia. For many years after 1810 one could have seen great caravans of wagons carrying well-dressed white people and their black slaves over the mountains and through the forests around the southern tip of the Appalachians.

Here is a story of how one Virginia family packed up and moved to Alabama.

"Yes, suh, we're goin' to move," said Colonel Thomas Culpeper of Southampton County, Virginia.



Robert Lawson

FIG. 61. A pioneer of the West Virginia mountains and his farm.
Where are his neighbors?

"Where are you goin' to go?" asked the colonel's friend, Major Dabney.

"We are goin' West, suh; goin' to settle those new cotton lands of Alabama. This land heah is about wo'n out. My great-grandfather moved heah in 1724. That's more than 100 yeahs ago. Land planted to cotton yeah after yeah does not last long, suh. Last yeah I didn't make a cent. Those Western lands are new. People out theah raise big crops, and we Virginians can't raise cotton for the same price as those new planters.

"You know how it is, Major; these laws the Northerners made hurt our crops. My father used to sell his cotton in England. He swapped his cotton for English goods, and made money; but, with the new charges, I can't sell in Europe, and these Northern millowners don't pay enough to keep the blacks in corn meal and calico, let alone me makin' any money."

"Have you sold your plantation?" asked the major.

"Yes, suh, and we start to move next week."

"How do you go out?"

"Just the way other people go West. We'll go down the Shenandoah valley, through Cumberland Gap, and down the Tennessee Rivah to the headwaters of the Alabama. We think now we'll settle somewheah in Alabama. Many of the Indians are gone, and much of that country is free for the taking."

"'Pears to me like a big risk, Colonel," broke in his friend.

"No, suh; my son went that way ten yeahs ago. He is in Alabama now. I have his letters telling of the trip. Come up to the house, suh, and I'll read you his description."

On the way to the house the major looked out upon his wonderful valley. He sighed as he thought that one more of his lifelong friends had got the "Western fever" and was to leave his broad acres and comfortable plantation home.

Everywhere there were signs of the trip to come. Slaves bustled about the house, packing the beautiful furniture; for the colonel's wife was determined to take many of the family pieces which her great-grandfather had brought from England in the early days. Huge wagons were being carefully loaded with all the things necessary for the long and tiring journey.

The colonel went to a half-packed trunk on the veranda and drew out a package of letters. They looked as if they had been read and reread.

"Heah they are, suh; they are real history. Some day Americans will write the story of this westward movement. It is the Americans who are taking up the West that will make our country great."

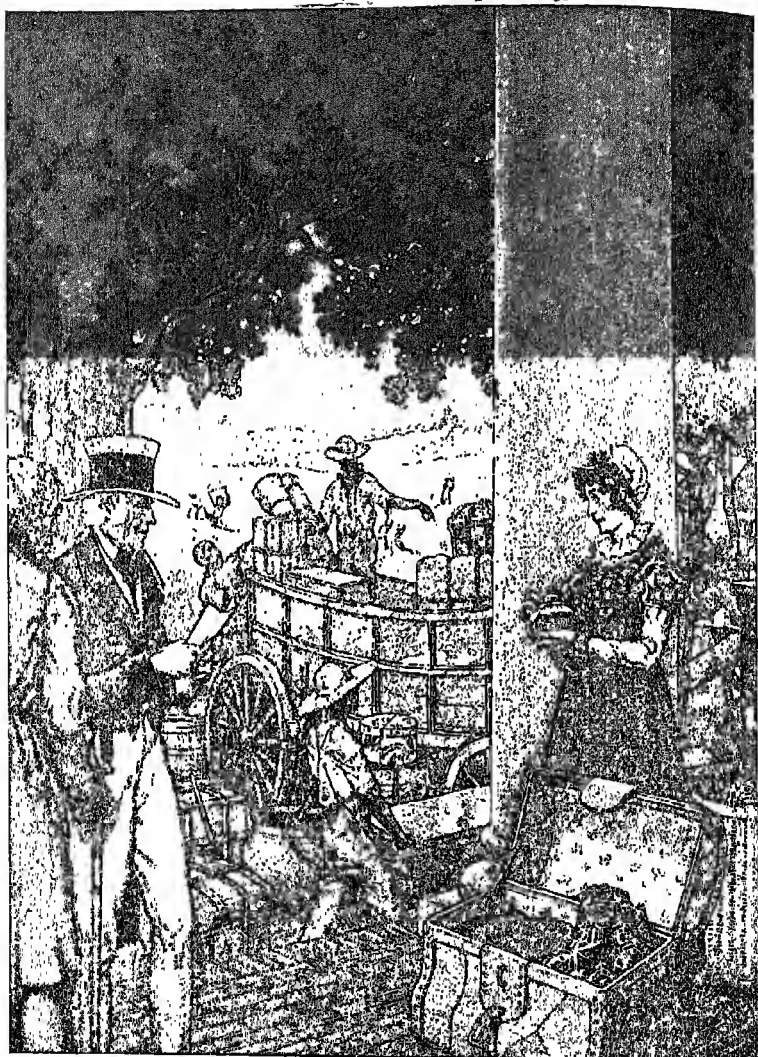


FIG. 62. Moving to Alabama in the early 1800's. How would the picture be different today?

He began to read :

September 18, 1817

Dear Father :

We reached Cumberland Gap last night and are camping here with about fifty families. It is a beautiful sight — the broad valley lying against the blue mountains, with the sharp notch through which we can pass to the other side. We are traveling with a family from Hagerstown, Maryland; but there are Yankees here from Boston and Worcester, Germans from Lancaster, and Scotch-Irish from nearly every part of the country.

Most of them are turning north to go into the new lands of Indiana and Illinois, but the Randolphs from Maryland are on the way to join relatives in Alabama and so we will go on with them.

Traveling is slow. Some days we make ten miles and some days only three, but the trail is well marked out. Settlers here say that thousands of people pass through the Gap every year. Here is our daily schedule. Up at 5.30. We arouse the slaves to get breakfast, which is ready at 6.30. Tents and tools are packed, with horses hitched to wagons, and ready to move at 7.30; travel until 11.30, dinner at 12.30; rest until 2.30. Travel again until we find a good place to camp; supper about 6.30 or 7 o'clock. Bed at 9 or 9.30.

We have been fortunate thus far in finding empty cabins to sleep in at night; in some places in the valley the settlers have taken us in.

The slaves are happy, except Dinah; she is sad because she had to leave Virginia.

We have had little rain and only one breakdown. That was easily mended. We start to follow the Tennessee River tomorrow.

"Here is another letter," said the colonel, "written after they had reached Alabama."

January 15, 1818

Dear Father :

Here we are, settled on the new plantation. It is wonderful land. We have been here for two months. The trip down the Tennessee was beautiful. Many of the Indians in northern Alabama have gone farther west, so there was no trouble with them. We made a flatboat when we reached the Alabama River and put our things on it. Two months from the day we started we found our new home in Jefferson County. The Randolphs decided to stay five miles down the river. The slaves are happy and contented and are at work clearing the land. In about a month they will be planting our first crop of cotton.

The people here have been friendly. Nearly all of them are Virginians or are from the Carolinas and Georgia. The Marions from Georgia have 10,000 acres above us, and Louise and I are staying with them until the house is finished.

"You see, suh," continued the colonel as he put the letters away, "it is not such a hard trip, and in that land I shall find good soil and an easy place to sell the cotton. Jim sells his crops at Mobile."

"Well, Colonel, I hope it'll go well with you. I've got to go back to the village."

The Old Planters Moved to New Soil

For nearly 200 years the white settlers had lived on their plantations in Virginia and the Carolinas. For nearly 200 years they had raised tobacco and rice and

indigo. But they did not fertilize the soil and care for it tenderly as did the people of China and India and other countries who had lived on the same land for hundreds of years.

These Southerners would plant a field year after year with the same crop. Then they would leave it and move on to a new spot. There they would cut down the trees, pull out the stumps, and plant their crops. Year after year, generation after generation, they had done this, using each new piece of land as they had the old ones. By the time the Revolutionary War was over, these old Virginia and Carolina plantations were all worn out. The planters could no longer get a good living from them, so they sold out and moved West.

Nature Helped To Determine Crops and Ways of Living

Did you notice in the story about the South that there was little mention of planting corn and wheat? The one word that appears everywhere is "cotton"! It was cotton that was becoming "king" all through the new lands along the Gulf of Mexico. Why was this true? Why was cotton the chief crop of the South?

There were two reasons. One was the favorable geography of the new South. Let us see how that helped.

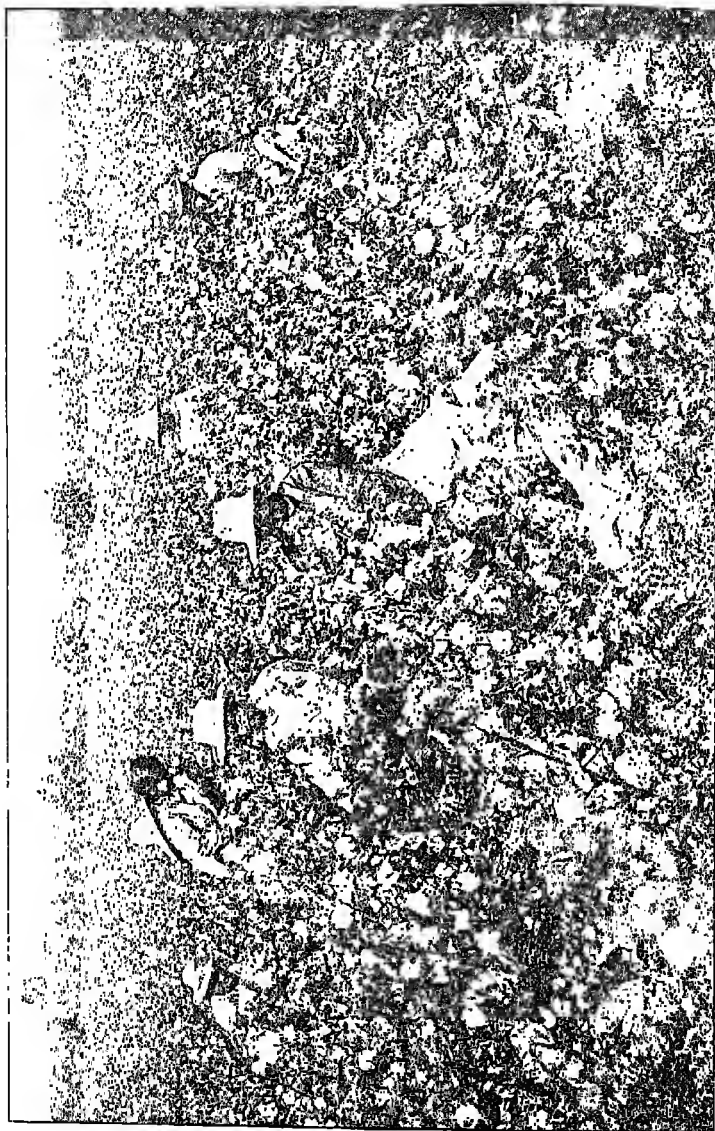


FIG. 63. Picking cotton on a plantation

The Geography of the New South

You know from your study of *Peoples and Countries* that cotton needs four things to grow well:

First, a long growing season.

Second, enough rainfall in the spring and summer months.

Third, many clear, sunny days.

Fourth, a rich, well-drained soil.

Where in the United States are there climate and soil like these together? As the maps on pages 145 and 189 show, it is in the Far South. The region south of about 37° north latitude, extending from the Atlantic coast nearly to the western boundary of Oklahoma and Texas, has exactly this kind of growing climate. Over a large part of this area the rainfall is from 40 to 60 inches and is fairly well distributed throughout the year. This, we know, is heavier than the rainfall of the Great Central Plain, which is from 20 to 40 inches.

The temperature also is favorable for the growing of cotton. Notice again the location of the South. The southern boundary extends nearly to 25° north latitude and the northern is hardly beyond 37° north latitude. One would expect a mild winter and a hot spring and summer, and that is exactly true. The temperature over much of this southland rises to 80 degrees during many of the months of the year.

The map on page 189 shows how all these things

worked together to make a rich "cotton kingdom," as the new South began to be called. It shows that this region has a long growing season. In fact, the lands around the Gulf of Mexico from Florida to southern Texas have more than 240 days of growing weather in each year. Consider how much longer that is than in the plains of the North, where most of the corn and wheat and such crops have a growing season ranging between 120 and 180 days a year. But all the Southern lands in which cotton is grown in largest amounts have a growing season of 210 or more days in a year. That is more than half the days of a year.

So we see once more how geography helps men to decide their kind of farming and their ways of living.

Invention Also Helped the Southerners to Grow Cotton

Even with the favorable climate and soil, however, cotton growing did not bring the planters as much money as they wished. The slaves could not clean it as rapidly as they could pick it. They could not get enough ready for the spinners of yarn and weavers of cloth in England. Cotton planters always talked about the need for a quicker and cheaper way to clean the cotton. Whenever visitors came that was the one thing they heard talked about.

One day in 1793 a Connecticut schoolteacher named Eli Whitney happened to be visiting in Savannah,

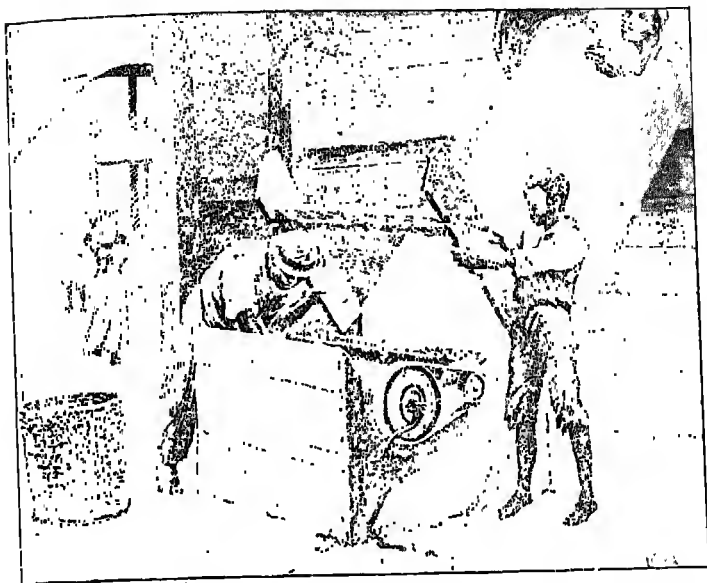


FIG. 64. An early cotton gin. It cleaned cotton much more quickly than the Negroes could do it by hand

Georgia. He heard his friend tell of the need of something that would help the slaves' hands to clean the cotton faster. "A machine will do it," said the teacher.

For days and days Eli Whitney watched the Negro slaves at their work. He was trying to think up a way to do it by a machine. Then, in a very short time, he got the idea and soon made a crude "cotton gin," like that in figure 64. Perhaps you are thinking, "That box!" Yes, that box, with its sawlike teeth, made it pos-

sible for much more cotton to be cleaned at one time. At first the gin was turned by slaves' hands, but later water power was used, and engine power still later.

Not only Georgia but Virginia and the Carolinas began to grow more cotton. New cotton states to the west were settled — Alabama, Mississippi, Louisiana, Texas, and others. Larger and larger became the cotton fields; greater and greater became the number of slaves bought and sold.

Then other inventions and improvements came to keep up with cotton growing. No sooner had the Northern states laid down railroads along the coast and over the Appalachians to the Middle West than the Southern states did the same thing.

Year after year better roads were built, and year after year larger amounts of cotton and other things grown on the farms came to Savannah. These were shipped on boats, and the port grew and grew.

Today, 200 years after the first settlements, Savannah is the largest Atlantic port south of Baltimore.

By 1850 the Central Plain Was Settled

These, then, were the two westward movements of settlement into the valley of the Mississippi. While one army of home-makers crossed the northern passes and valleys of the Appalachians and settled the valley of the Ohio and the northern regions, another army of

planters and farmers went over the southern routes and settled from Alabama to Texas. By 1850, then, several million Americans were living in the plain from Minnesota to Louisiana.

Chiefly because of differences in climate and growing seasons, this whole territory west of the Appalachians had been divided into two regions: (1) the northern, especially a great corn and wheat region; (2) the southern, chiefly a vast cotton region.

Books You Would Like To Read

- ALLEN, N. B. United States. Ginn and Company, Boston. See Chapter VI, "Cotton."
- CHAMBERLAIN, J. F. How We are Clothed. The Macmillan Company, New York, 1928. See pages 29-40, "The Cotton Fields."
- DARBY, A. C. Gay Soeurette. Frederick A. Stokes Company, New York. Life in a fur-trading post. The time is the days of the Louisiana Purchase.
- HAYES, MARJORIE. Little House on Wheels. Little, Brown, and Company, Boston. A journey from Vermont to Louisiana in the 1830's.
- KNOX, R. B. The Boys and Sally down on a Plantation. Doubleday, Doran and Company, New York. Life on a large cotton plantation in Alabama.
- PERRY, F. M. Four American Inventors. American Book Co., New York. See the story of Whitney and the invention of the cotton gin.
- STONE, G. L., and FICKETT, M. G. Days and Deeds a Hundred Years Ago. D. C. Heath and Company, Boston. See the story of the invention of the cotton gin.
- TURPIN, E. H. L. Cotton. American Book Co., New York. The story of cotton, especially in America



FIG. 65. The Conestoga wagon arrives in Brownsville. All the villagers were eager to see this new way of traveling

Rodney Thomson

CHAPTER XIII

Communities behind the Frontier

OUR STORY takes us once more to the trading post at Brownsville, Pennsylvania, where William Martin staked out his land and built his cabin in 1772. You remember how he took his family to the home in the clearing at the time when traders and settlers were beginning to cross the Appalachians. Turn back to the story again if you have forgotten it. Keep in mind that our next story begins in 1800. Twenty-eight years have passed. Ann Martin, the little girl who had grown up in that trading post, has become a woman. She has married John Ford, the son of a neighbor. By 1800 she has a family. More people have settled around the trading post. Now the story goes on.

1800: The Young Village of Brownsville

Mary, Sara, and James, three of the children of Ann Martin Ford, stood with a group of their neighbors in Brownsville looking at a group of newcomers and their curious wagons. A neighbor was talking. "They're Conestoga wagons, children, like the ones I've heard father tell about in eastern Pennsylvania."

Four large cloth-covered wagons stood beside the wharf, which reached out into the river. Their owners, who had just come across the mountains, looked very tired. Their clothes were stained with mud. A tiny baby was sick, and its mother sat on the seat of one of the wagons holding it and crying a little. Several men were loading furniture and tools from the wagons onto their flatboats in the river. The boats had roofs on them to protect the people and the goods both from the weather and from the attacks of Indians on shore.

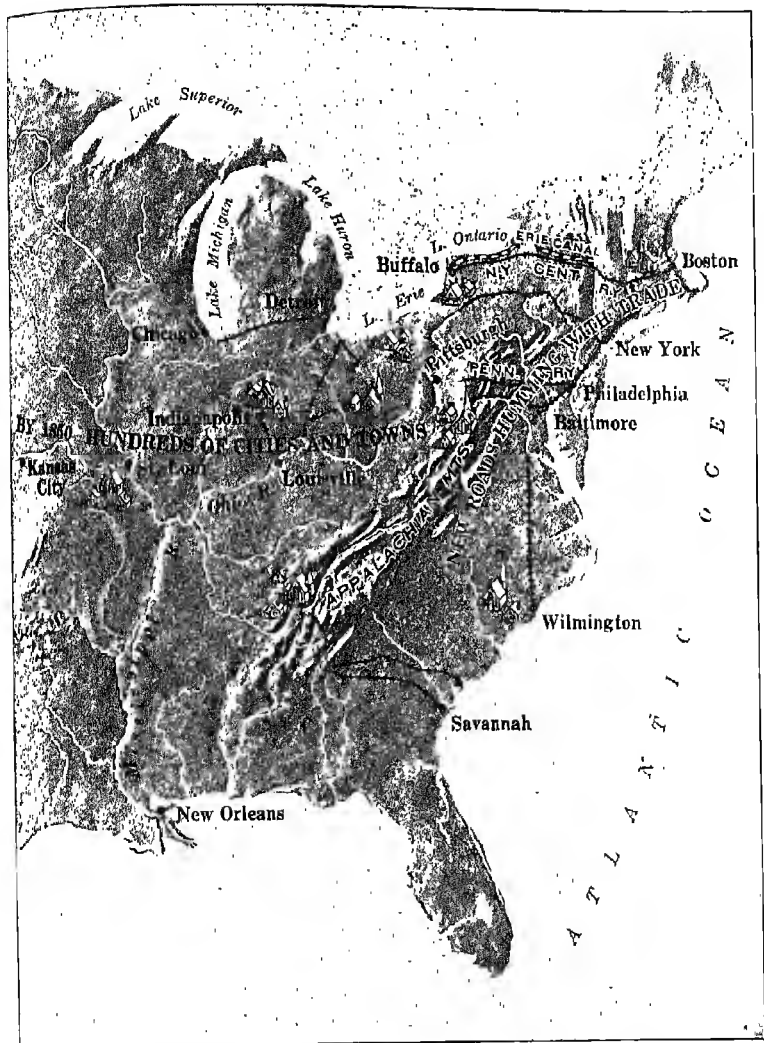
It was said that these people were going all the way through to Kentucky. Down the Monongahela they would float to Pittsburgh, and then on down the great Ohio. The three children moved as close as they could to the place where the men were loading the barges.

Young Jimmy Ford knew the man who built the boats. His name was Sam Young, and he was one of the best boatbuilders in that part of the country. People said that he made lots of money building boats for the people who were coming through from Maryland and eastern Pennsylvania on their way to Kentucky.

Two men were talking. The newcomer said to the other, "Quite a village you've got here."

"Yes," replied the Brownsville man. "It's going to be the biggest place in all this part of the country."

"What about Pittsburgh?" asked the other.



MAP 14. This map shows the principal cities and towns which grew up behind the frontier

"Pittsburgh won't beat Brownsville. We hope to build up the best city of the West here."

Just then some men carrying farm implements, weapons, and tools came down to the wharf. The stranger said to the Brownsville man: "You must have lots of trade with people coming through. Must make your town grow fast."

"Yes," replied the other. "We have two stores, and they both do a big business. The place is growing fast. Twenty-five years ago there was only a fort here and a handful of cabins."

After the children had watched the loading for a while they grew tired and decided to go back home. They walked through the neck, a narrow stretch of lowland between the creek and the river, and climbed a very steep hill to the residence part of the village. Here was Front Street, where a number of stone and frame houses had been built.

The children went on through the town until they reached the farmhouse where they lived. It was a big two-story house and was thought to be very fine in those days. At a distance was a barn made of stone. Around it were fields of corn, wheat, rye, oats, and buckwheat. On one side was a fine apple orchard, and at the back a garden. In a meadow a flock of sheep grazed.

The Fords were one of the most wealthy families in all that part of the country. When the town was laid

out in 1785, their grandfather, William Martin, had wisely sold most of his farm for town lots at a very good price. When he died ten years later he left the money to his daughter, Mrs. Ford, and her brother. Mr. Ford, the children's father, had just built a paper mill two or three miles away, and was doing a growing business.

Thirty-five years passed. The Ford children grew, and the village of Brownsville grew too. The next story tells about James Ford and his family, for he too had married and now had two children.

1835: The Growing Town

One bright June morning in 1835 James Ford, now a grown man, walked down the hill with his two sons. They were on a great adventure. They were going to take the steamboat down to Pittsburgh. Past the Catholic, Methodist, and Presbyterian churches, the bank, and the stores they walked. Then they crossed over the creek on the new iron bridge, the first of its kind in the country. Everyone admired that bridge.

As they passed the inn a stagecoach drawn by four horses drew up with a flourish, and four people who looked as if they were weary with travel got out. The man wore clothes like Mr. Ford's — white trousers, a long-tailed coat, and a high beaver hat. The women wore full skirts, stylish shawls, and bonnets.

"That stagecoach is going out of business before long," said Mr. Ford. He was very proud of the fact that he kept up with the times.

"The railroads and canals will soon end stagecoaches," he continued. "In the East everyone is talking about railroads. Why, already they've built the Philadelphia and Columbia Railroad and the Allegheny Portage Railroad. Those two, with the new canal, will open up the way from Philadelphia to Pittsburgh. It's wonderful the way times are changing!"

On down the street they went toward the wharf. Soon they were on the boat and eager to start. But they had to wait on deck for a half-hour or so before the boatmen began to shout to each other. Then the ropes that held the boat to the dock were loosened, and the boat chugged and puffed out into the river.

The boys sat down on the deck, beside their father. William Ford, the older son, asked him about the coal mines which they could see on the hills beyond the river bank. Throughout that whole region coal had been discovered. On the Martin farm were rich beds.

Inventors had learned how to smelt iron, that is, to separate it from the rocks, and manufacturers of iron were beginning to locate their factories near the coal mines. No wonder Brownsville was growing fast!

¹A drawing from an old print in the historical collection of the state of Pennsylvania.



Harold Siebel

FIG. 66. How the growing town of Brownsville looked from the National Road in 1835¹

During this time Mr. Ford had decided there was a better future in iron and coal than in paper. He sold his father's paper mill and put the money into iron mills and coal mines. And now his son William was already talking about leaving school and going into the coal-mining business.

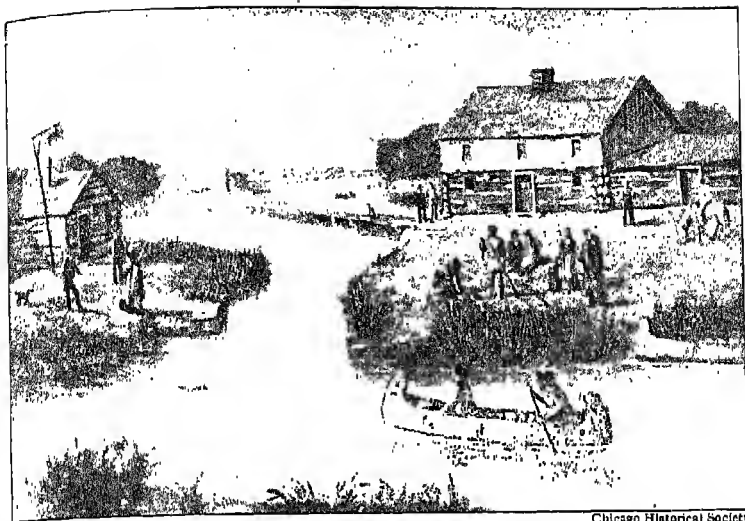
Next the boys began to ask about Pittsburgh. Was it a very fine town? Much larger than Brownsville? When would they be there? Mr. Ford tried not to answer too many questions, because he wanted them to be surprised by the big town with its docks and iron mills, its big houses, tall buildings, and busy stores.

Another 35 years passed. Little William Ford and his brother had grown up and had children of their own. Brownsville had grown up too and was becoming a coal and railroad town.

**Like Brownsville, Thousands of Communities Grew Up
behind the Frontier**

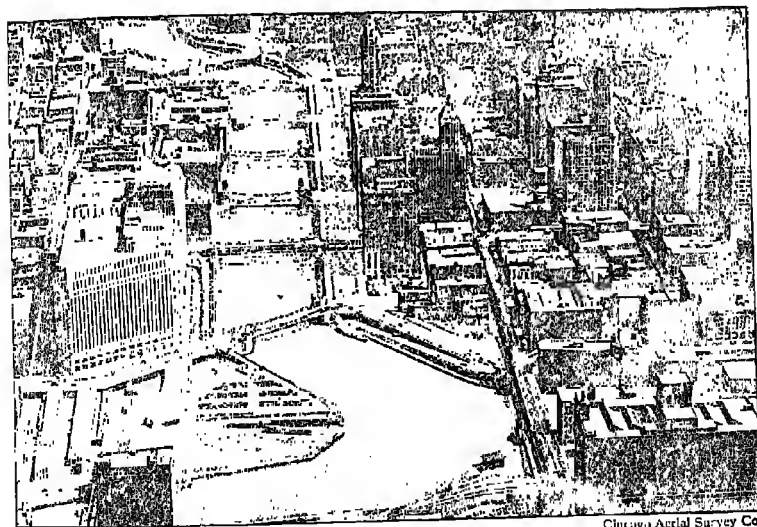
This, then, is the way one community grew from a few lonely log cabins into a busy manufacturing city. The trading post became a village. The village became a town. The town became a city. More than 100 years passed while that was happening.

So it was with thousands of settlements up and down the valleys, across the central plains, along the



Chicago Historical Society

FIG. 67. This is part of Chicago 100 years ago



Chicago Aerial Survey Co.

FIG. 68. This is the same spot in Chicago as it looks today

Pacific coast, in the plateaus between the Western mountain ranges. Everywhere the westward-moving trail-blazers went they left behind a few who made their homes on the land.

One by one other home-makers came and cleared the land and built houses near them. Because they could not provide everything for themselves, some person interested in business always built a store. There the settlers came to trade.

One by one craftsmen came there also to make their homes. The blacksmith came and set up his little shop. He made nails and shoes for the horses as well as simple tools of iron. The carpenter and the shoemaker came and opened their shops.

Slowly the villages grew. You remember how even when the first settlers came from England, in the late 1600's, villages had grown up close to the Atlantic Ocean. In the 1700's, as the people took up the land in the back country, — from 50 to 100 miles from the coast, — villages grew there as well. So the story repeated itself again and again as the westward movement of our forefathers took place.

Books You Would Like To Read

EGGLESTON, EDWARD. *The Hoosier Schoolboy*. Charles Scribner's Sons, New York. The backwoods of Indiana about 1850.

HUNT, M. L. *Lucinda: A Little Girl of 1860*. Frederick A. Stokes Company, New York. Life in Indiana in the 1860's.

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- MOORE, A. C. *Nicholas; a Manhattan Christmas Story*. G. P. Putnam's Sons, New York. New York history and ways of living, past and present.
- ORTON, MRS. H. *The Treasure in the Little Trunk*. Frederick A. Stokes Company, New York. Patty has lots of adventures in a journey in a covered wagon in 1823.
- OTIS, JAMES. *Stephen of Philadelphia*. American Book Co., New York. Life in Penn's colony in the early days.
- PARTON, ETHEL. *Melissa Ann, a Little Girl of the Eighteen Twenties*. Doubleday, Doran and Company, New York. Life on the Eastern seacoast in the 1820's.
- WHITE, E. O. *When Abigail Was Seven*. Houghton Mifflin Company, Boston. Life in the United States in the 1820's.

PART IV

Binding the Communities Together



FIG. 69. A post rider of 1828

C. L. Woodward

CHAPTER XIV

From Pack Horse to Motor Truck

The People of the New West and the Old East

WE HAVE read about how the settlers packed up and moved West, where they settled and built their new communities. Of course they did not forget their friends and relatives whom they had left behind. Often a few members of a Massachusetts or a New York or a Maryland family would move out to Marietta, Ohio, or some other settlement. The people of the family would want to send letters back to their friends and neighbors. They would wish to buy things which they needed and which they could not purchase on the frontier.

In order to send messages and to exchange their goods, they needed "transportation"; that is, they must have roads on which to travel. They must have boats and wagons and horses.

Here are two stories. The first one will show you how people sent messages 100 years ago; the second one shows some ways that we use today. Both of them will give you a picture of how transportation grew in our own country during that time.

1. Telling the President in 1828 That He Was Elected

Toward the close of a cold December afternoon in 1828 a horse and rider slowly made their way along the Lebanon Road to Nashville, Tennessee. It was beautiful rolling country through which the horseman had been riding. From Washington he had come up the winding Potomac, then on over the Appalachians through the gaps in the mountains. From there he had gone over the new, rough Kentucky and Tennessee roads.

As he came near Lebanon he stopped to ask a passing farmer a question. The farmer was more than willing to answer.

"General Andrew Jackson?" he said. "Oh, yes; straight ahead and first road to your left. It's the Hermitage you want. That's where Andy lives. Big house, set back among the trees. Fine place he has. Hope you've no bad news for 'Old Hickory'?"

The messenger from Washington smiled. "No; I think that he will find it good news." He leaned closer and spoke a few words. The other gasped in astonishment. "You don't say! Not our Andy Jackson! What will they do now down at Washington? I'll hurry on and tell the folks the news."

An hour later the lone rider pulled his tired and sweating horse up to the door of the Hermitage.

"Is the President at home?" asked the stranger of the colored servants gathered at the door. They stared in surprise.

"The President? You don't tell me our massa's done gone and been elected president?"

"That's what I do. I have the notice here. Been on the road from Washington for four weeks. Andrew Jackson was elected November 10. This is December 9. What a terrible trip it's been, too! I used seventeen horses trying to break a record. Roads so bad I couldn't make any time at all. People around here don't seem to mind the mud. They've been telling me the road's 'middling good' ever since I left Cumberland, three weeks ago. And the mud's been over my boot tops a third of the way!"

Even the President did not know that he had been chosen until several weeks after his election. That was the way messages were sent 100 years ago!

2. How It Is Done Today

How soon does the newly elected president of the United States hear of his election in these days? One month later? two weeks? a week? Let us see.

The voting stops at six o'clock in the afternoon of election day. By the time the candidate is having dinner his home is buzzing with action. Special telegraph and telephone wires connect it with the central

stations of the large cities. Messengers are going and coming. By seven o'clock his family is on tiptoe with excitement. Telephone calls and radio messages come every few minutes.

"Tell the chief that 2141 districts in New York State gave him a lead of 7800."

"Omaha, Nebraska, goes for our man by 22,000. It looks as though we would win the whole Middle West."

A call comes from Chicago. "The Middle West is going well. Three fourths of the districts in Illinois, Michigan, Wisconsin, and Iowa have wired in their returns. You are leading in every state!"

By ten or eleven o'clock — midnight at the latest, unless the election is very, very close — the man who wins can go to bed knowing that he will be the next president of the United States. In the morning half a dozen newspapers will tell how it was done.

Almost every person in the United States can have the same knowledge at the same time. Thousands of telephone and telegraph wires carry messages to the communities of the country. "Extras" which appear late in the afternoon and during the evening tell at least the city people of how the voting is going. The news is also given out to the radio stations, which broadcast it to every corner of the land. Swiftly to all parts of the country goes the message "A new president is elected."

A century ago sailing ships were the fastest means of sending news to foreign lands, and these took weeks to cross the ocean. A hundred years ago written messages traveled no faster than the rider on horseback or the sailing boat. But times have certainly changed! Today the express train, the automobile, and the airplane have made communication faster and faster. But even they are slow when compared with the telegraph, the telephone, and the radio. Almost as soon as it happens news is flashed to all parts of the world.

Travel in the More Settled Regions in the 1700's

Even as late as 1780 there were almost no smooth stone roads in the entire country. Wagons and coaches were uncomfortable. Travel by sailboat was slow and dangerous. There were no railroads, and the steamboat was a thing of the future.

A traveler writing in 1797 tells how bad the roads were even then.

A stagecoach which left Philadelphia on the fifth of February, 1796, took five days to go to Baltimore. [A train does it today in an hour!] The weather for the first four days was good. The roads were terrible. . . . There were many holes to the depth of six, eight, or ten feet. . . . Coaches were overturned, passengers killed, and horses destroyed by overwork put upon them. In winter sometimes no stage sets out for two weeks.¹

¹ Adapted from Dunbar's *History of Travel in America*. Copyrighted and published by the Bobbs-Merrill Company. Used by special permission.

If a man in Philadelphia, for example, had to see someone in New York, he would write a letter like this and hope that the letter would reach his friend before he did. "I am planning to start on the trip a week from Tuesday and hope I shall see you by the following Monday."

Of course if he did not get there by Monday he would arrive two or three days later, and that would do just as well.

Most of the traveling was done in stagecoaches, like that shown in figure 70, page 239. These were used for freight as well as for passengers. Trips between towns were not made at regular times, but only when there was enough to make a load. There were few bridges, and rivers had to be crossed either at "fords" (shallow places) or in crude ferryboats. If heavy rains made a stream unusually high, the travelers often had to camp on the bank until there was less water. Sometimes they waited for several days. Travelers expected to be delayed and felt that they had no cause to complain, even though they might be going only short distances.

What a contrast to the way we travel today! At noon the Philadelphia business man calls his New York friend on the long-distance telephone and says: "I am driving over by automobile this afternoon. We can meet at dinner."

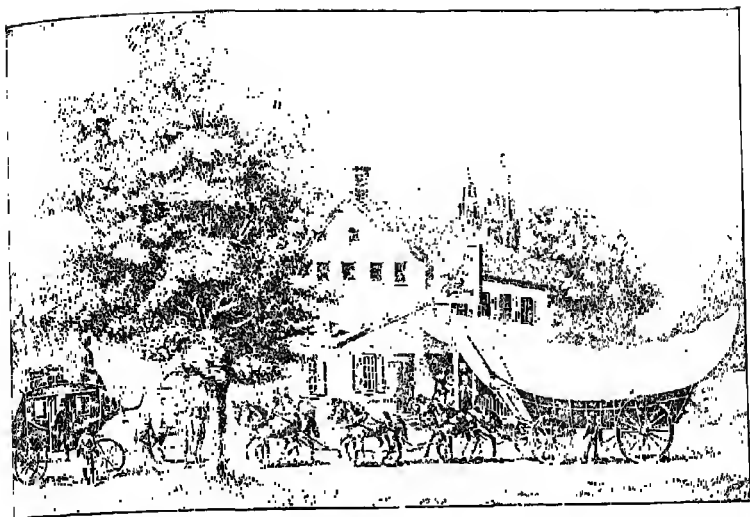


FIG. 70. At the left side is a stagecoach stopping at a roadside inn; at the right side is a Conestoga wagon

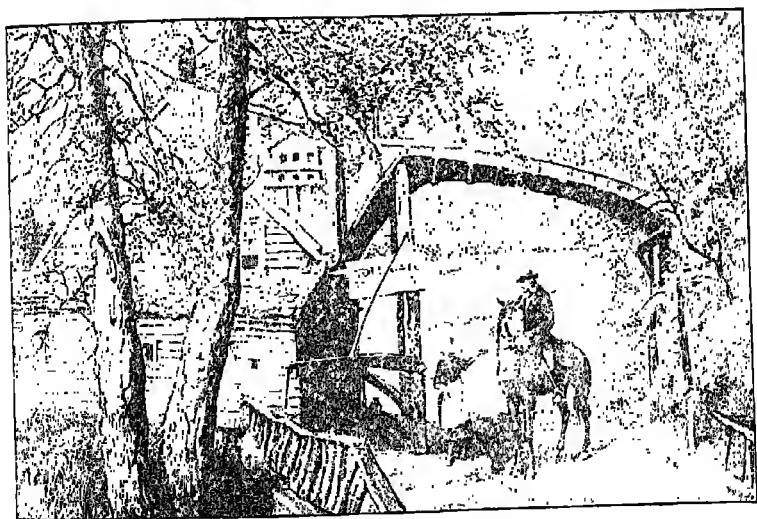


FIG. 71. Paying the toll at one of the old turnpike bridges

How the Mails Were Sent in 1790

Benjamin Franklin, a leader in so many things of that day, was one of the first to see how necessary it was that the mails should be carried quickly and safely. He started post offices as early as 1753, and became himself the first Postmaster-General of our country. Roads were improved very slowly, however, and by 1790 there were only 75 post offices in the entire country.

In those days each post office had to pay for itself; so no letters were sent out until enough had collected to pay the cost of sending them. No newspapers, books, or parcels were carried. The charge, which was from about 6 cents to 25 cents, was decided not by weight, as it is today, but by the distance the letter was going.

Mail started by stagecoach from New York to Philadelphia, a distance of about 100 miles, three times a week. Once having started, one could not be sure that it would arrive at any set time. Even then the stagecoach that carried mail was rapid when compared with most of the travel of its day.

Such was the postal service in the 1790's, when most of the people lived along the Atlantic seaboard and distances between "the East" and "the West" were not more than from 100 to 200 miles.

"Trade" Brought Better Ways of Transporting Things

One thing, more than all others, led the people to build better roads and find quicker ways of sending messages. That was the growing need to trade.

Do you recall from earlier books what we mean when we say two people trade with each other? Suppose you had two knives and your friend had two tops. Now you wanted a top and he wanted a knife. You would give him a knife and he would give you a top. That would be trading, or exchanging things.

Or suppose you had ten cents and saw a top in a store window marked "10 cents." You would pay the storekeeper the ten cents and receive the top. In this case you would exchange money for goods. That also is trading. Grown-ups, as well as children, trade in these ways today as they did in 1800.

The farmers and hunters and trappers of the Ohio and Mississippi valleys had more of some things than they needed. They brought their beaver skins, their corn and wheat and vegetables, as well as lumber and tobacco, to the trading posts. They raised sheep and could spin and weave their own wool. They had things at hand with which to build their houses.

But there were other things which they could not make or grow, such as hammers and axes, guns and other things of metal, glass, silks, and pepper and other

spices. As time passed some of these things were made in the growing Western towns. For example, when the blacksmiths came to the community and set up their little forges, they hammered out axes and other tools. These were usually made from bits of old iron brought from England or from the iron ore that the miners dug from the ground.

Almost everything, however, — tools, weapons, and farm implements, fine cloth and garments, furniture, as well as all the pepper and spices, coffee and tea, and other special foods, — had to be brought over the mountains and down the rivers from the Eastern cities.

With the very first settlements trading started between the old East and the new West. The "city" things came from New York, Boston, Philadelphia, and Baltimore. You can see why these cities had grown at the spots where they did. Each was located on the coast, and each had a fine harbor and was a port for seagoing vessels. Three of them were located on or near important rivers.

On the broad and deep Hudson to New York's docks went the vegetables and other products grown on the farms of northeastern New York State. On the Susquehanna River hundreds of flatboats drifted each year heavy with goods for Baltimore. Philadelphia had the swift-flowing Delaware to bring to its markets the goods of eastern Pennsylvania and southeastern New York.

Better Roads Were Being Built

By 1790 the business men of New York, Philadelphia, Baltimore, and Boston were in the full swing of a race for the trade of the West. Each city knew, of course, that it must have good roads and fast vehicles.

"Give us smooth roads! Give us speedy coaches!" the storekeepers and manufacturers demanded.

"A week from Philadelphia to New York! What a waste of time! We ought to do it in two days!"

"Twenty-two days from Boston to Savannah! We ought to do it in half the time!"

You remember that just at that time a Scotch road builder named John McAdam discovered how to make a better road than had been made before. Soon Americans learned "the McAdam way" and began to build "macadamized" roads. The business men of the towns as well as of the big cities formed companies, raised money, and put men to work. The fever of road making spread all along the eastern seacoast. New York State began its road building in the wonderful Mohawk valley. In June, 1796, there was only an Indian path between Utica and Geneva; in September the famous Genesee Road was completed, and a stage-coach made the hundred miles to Geneva in three days.

After that wagons and stages began to run frequently between Albany and Geneva. A wagon could

carry fourteen barrels of flour eastward and in about a month could return from Albany with a load of needed supplies. In five weeks 570 sleighs carrying new settlers passed through Geneva to lands farther west. The Genesee Road made this traveling much easier.

There was much road building in other parts of the state too. Between 1800 and 1807 eighty-eight road companies were formed and \$800,000,000 was spent. Twenty large, expensive bridges were built and 2000 miles of good roads were laid.

Private citizens saw in road building a chance to make money. They formed their own companies to construct roads called turnpikes. A gate was built at different places on the road, and each person who drove over the road had to pay a certain amount of money, or a "toll," as he passed each gate. Sometimes these tolls were only a few cents; oftentimes they were much more — even a dollar. So it was that very large amounts of money were earned by the turnpikes.

Toll bridges as well as roads were met very often in those days. Even today there are many of these bridges where, in order to get across a stream with a wagon or an automobile, one must pay.

After 1800, better highways appeared. From New England to Georgia the people were building roads. Dirt roads, rough in bad seasons; stone roads, good

in all seasons; cinder roads, plank roads, even log roads (called "corduroy"). Any and every material was used; anything, so long as there were roads.

The Cumberland Road

In the meantime the people west of the Appalachians were also asking for roads. And citizens everywhere were beginning to say: "The government should build and repair the roads. That is a job for the public to do, not for people to have as a business."

In answer to this demand came the Cumberland Road, which was built by the public. This means that it was paid for by the money which the government got from the people as "taxes." This road, following mile by mile behind the pioneers and settlers, made the settling of the country and the growth of business very much more rapid.

In 1811 the government gave a quarter of a million dollars, and work was begun. Beginning in Maryland, the road crossed into West Virginia, on into Ohio, and from there into Indiana and Illinois. It was 64 feet wide and was built very carefully with stone and sand so that water would drain off well. So fast was it built that mail coaches drove over it to Wheeling, West Virginia, as early as 1817. Within five years one business company in that city had sent 1000 wagons over the road.



FIG. 72. Traveling West on the famous Cumberland Road

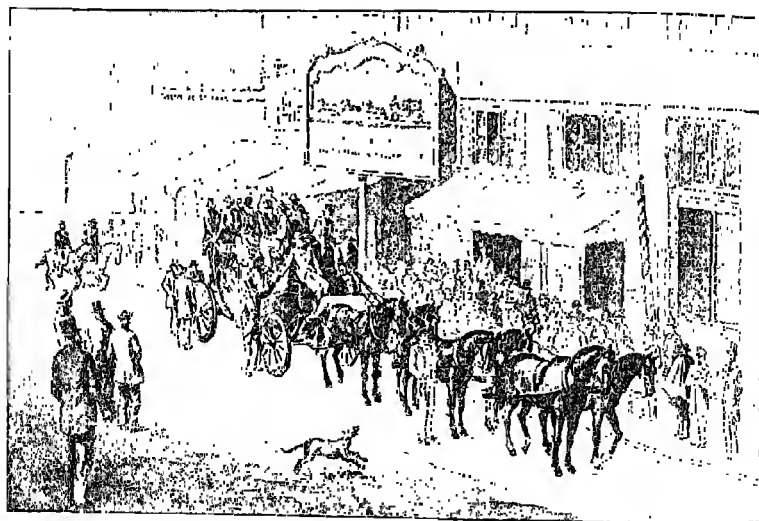


FIG. 73. An early "Concord" coach leaving San Francisco for the East¹

The Cumberland Road soon became a great *inter-state* highway. That means that the highway went into more than one state. Freight and passenger traffic began to hum back and forth. Private companies formed stagecoach and freight lines and built stage houses where passengers might rest, eat, and even stay over night in the towns and villages that began to grow up along the road.

Striking changes came about in the coaches themselves. One kind, the "Concord" coach, became known all over the country. Today we all have heard of the New York Central Railroad, the Pennsylvania Railroad, the Great Northern Railroad, and many others. In the 1820's children in the new West knew the names of the big stage lines — the National, the Pioneer, the Good Intent, the June Bug, the Defiance, the Pilot. Even the coaches were often named after well-known people of the day, just as our Pullman cars and our steamers are.

The drivers of these coaches were famous too. One of them, a man named Westover, made a record of 45 minutes for the 20 miles between Uniontown and Brownsville. "Red" Bunting drove 131 miles in twelve hours, carrying the news that war was declared against Mexico. Many other exciting races took place along the Cumberland Road.

Redrawn from Dunbar's *History of Travel in America*.

We do not have space in this book to tell you more of the history of road making from that time on. It is enough to say here that as the people settled the whole continent between the Atlantic and the Pacific they built a large system of roads. Through every region which they traveled, roads began slowly to appear. First there would be a narrow trail; then a somewhat more traveled cart path or rough wagon road. This would later become a smoother dirt road, and finally a broad, well-paved highway.

By 1890 there were fairly good dirt roads to be found in all the states from the Atlantic Ocean to the Mississippi River. Even beyond the Mississippi to the Pacific Ocean, there were thousands of miles of hard, smooth roadways over which horse-drawn wagons could safely be driven.

Animals Still Pulled the Wagons

But in all that time there was no change in the power which pulled the vehicles on these highways. Road transportation for men and goods was done by the strength of animals. Horses did most of man's work, although oxen also pulled the loads of freight. Even today in some regions animals are used for heavy work.

Of course the animals could not move swiftly. Five miles an hour, forty miles a day, was all anyone could hope for, even if the roads were good.

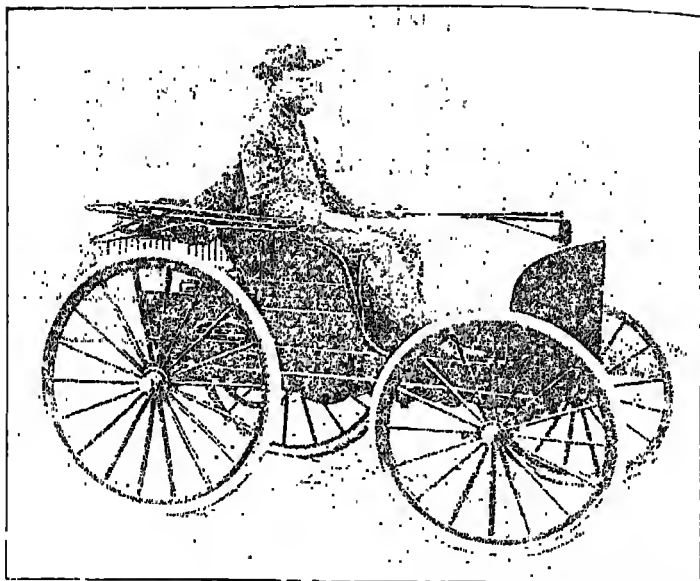
Then Came the Miracle!

After 1890, however, came the automobile, or, as people at that time called it, "the horseless carriage."

The very first horseless carriages had been invented in England more than 100 years before. They were steam wagons. Even as early as 1784 William Murdock had built a wagon that went under its own steam power. In 1801 Richard Trevithick built a steam automobile in England. On its first trial this automobile made a trip of six miles and carried several passengers. Later Trevithick built a second car which worked fairly well, but he never was able to make his steam automobile really successful.

About the same time Oliver Evans, an American inventor, built an automobile that was both boat and wagon. He called this queer-looking vehicle *Oruktor Amphibolos*. Through the streets of Philadelphia and on into the Schuylkill River, Evans drove it under its own power. He thought that this would show that steam could be used both for land and water transportation. It did; and other men, both in England and in the United States, continued to experiment.

In 1824 an American, William Henry James, made a steam automobile which would carry 20 passengers. Five years later he built a steam-driven passenger car which he drove on the streets of New York City.



© Keystone View Co.

FIG. 74. Charles Duryea seated in what is regarded as "the world's first real automobile." Compare it with pictures of the automobiles of today

A short time afterward he was employed by the new Baltimore and Ohio Railroad, and thereafter spent his time on the invention of the steam locomotive.

Each new idea in the steam wagon helped later inventors. Between 1831 and 1836 an Englishman, Walter Hancock, built several steam automobiles which ran successfully. Hancock carried as many as 11

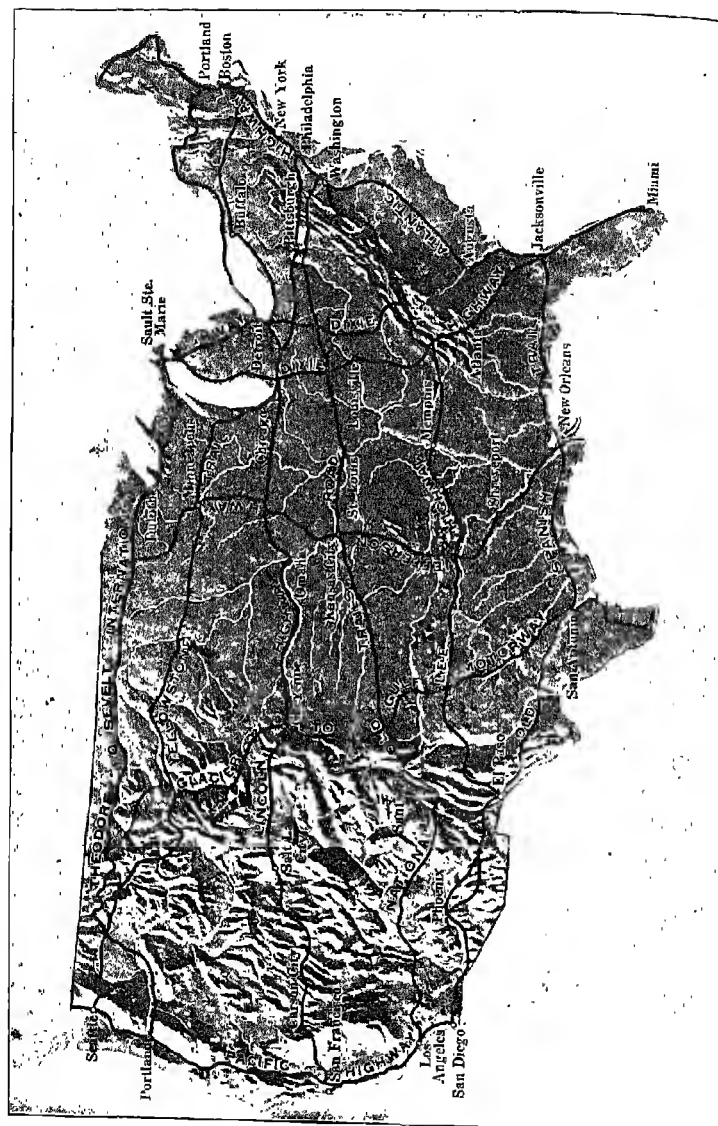
passengers at one time, between London and Stratford, at the average speed of 9 miles an hour. Later his machine could go at the "astonishing speed" of 17 miles an hour. During the next five months he made over 700 trips, carried more than 12,000 passengers, and covered 4000 miles.

So we can be sure that almost 100 years ago inventors had proved that steam automobiles could be made. Up to 1860 no less than 60 different men had worked at the improvement of the steam-driven automobile.

Steam engines, however, with their big boilers and large amounts of coal or wood, were too heavy for light wagons to carry. Men then began to experiment with small "gas" engines. These could be made much smaller. Then, too, gasoline required much less space than coal or wood.

Many years passed, of course, before the inventors succeeded in making automobiles run by gas, but they did. About the years 1890 to 1895 George Selden, Charles Duryea, Ellwood Haynes, and Henry Ford had each made a gas-driven car. From that time on, automobiles were made better and better. Since those years greater changes have occurred in road travel than in the entire history of the world before that date.

It is little wonder that the automobile has been called one of the most important inventions ever made by man. When your parents were young, automobiles



MAR 15. The principal highway systems of the United States

were a new plaything. For a time they were a luxury. They were improved so rapidly, however, and are now produced for such low prices, that more than half the families in the United States feel them to be a necessity. Today there are more than 25,000,000 automobiles in this country.

We wish there were space to tell you more of the story of roads and wheels in the history of our country. You can find other books which you will wish to read. Perhaps enough has been said, however, to show you that the growing communities of our country were tied together after 1800 by roads and vehicles.

Books You Would Like To Read

- DALGLIESH, ALICE. *America Travels; the Story of a Hundred Years of Travel in America.* The Macmillan Company, New York. Interesting stories of travel from the stagecoaches of yesterday to the trains of today.
- FOX, F. C. *How the World Rides.* Charles Scribner's Sons, New York. History of transportation in America.
- HADER, MRS. B., and HADER, ELMER. *Picture Book of Travel.* The Macmillan Company, New York. Interesting text and excellent illustrations of the story of transportation.
- LENT, H. B. *Wide Road Ahead! The Building of an Automobile.* The Macmillan Company, New York. Well illustrated and interesting.
- WALDEN, A. T. *Harness and Pack.* American Book Co., New York. Descriptions of the animals that have been used to haul goods and carry people in America.

CHAPTER XV

To the West : Steamboats and Canals

YOU REMEMBER that during the first 150 years of the white man's stay in America his life depended very much on the rivers. Most of the first communities were built on their banks. Before 1800 the settlers depended on the waterways for much of their trade.

The Susquehanna River must have been an easy route in those days. Hundreds of farmers of central Pennsylvania and south-central New York hauled their products to the river and its branches. There they loaded them on flatboats, letting the current of the streams take them to city docks at Baltimore. Is it any wonder that Baltimore led other cities in trade for many years?

The Delaware River served eastern Pennsylvania and southern New York. In 1790 Philadelphia, on the Delaware, was the largest city of the young country. Farther south the Potomac River acted as the freight route for the farmers of the back country of Virginia.

In those days long light boats were used. These were built so that they could float or sail, be rowed downstream with oars, or be pushed upstream with

poles. Often rivers became too shallow or there were rapids or falls. Then the boatman patiently unloaded his boat and took his goods, both heavy and light, to a place beyond. After carrying or dragging his boat around the shallows or rapids, he loaded it again and went slowly on his way. Slow indeed was transportation in those days. From ten to twenty miles a day was all that could be expected, even when traveling was good.

Although most of the people did not know it, however, exciting changes were just ahead.

Queer Boats on the Rivers

In the year 1788 the Americans who lived on the banks of the Delaware were astonished by the appearance of a queer-looking boat on the river. It had no sails, and yet it moved. Even against the current of the river it went along faster than a man could walk, but with a good deal of puffing and snorting and splashing of water.

What *was* the strange thing? It was John Fitch's steamboat! Only a few years before, James Watt had made a steam engine in England that would work. Now in Europe and in the United States people were trying to use these engines in boats as well as in wagons. Fitch was one of these men, but he had a hard time. It required money to build engines and boats, and

Fitch was a poor man. For years he tried to get help from wealthy business men and from governors and state officials. Almost alone he worked to prove that boats could be driven by steam.

It was in 1788 that Fitch's steamboat made a trial trip of 20 miles. Then he experimented further to improve it, and during 1790 it ran more than 1000 miles on the Delaware River. The average rate of speed was about 8 miles an hour in smooth water. But people laughed at Fitch, and ten years later he was forced to give up his attempts.

But his experiments were not in vain. Indeed, they marked the beginning of many years of trying to build steamboats. Other men kept at it, and finally, after 1800, success came.

Robert Fulton's Steamboat

One day in 1807 some villagers were standing on the west bank of the Hudson opposite Poughkeepsie. They were watching a strange, dark-looking boat that was moving slowly up the river. Some thought it might be a sea monster. Instead of the usual masts it had tall, straight pipes rising from the deck. Machinery was moving up and down and big paddle wheels were turning round and round, splashing and churning the water. Clouds of smoke rose from the pipes and filled the air.

¹By courtesy of the Continental Insurance Company.

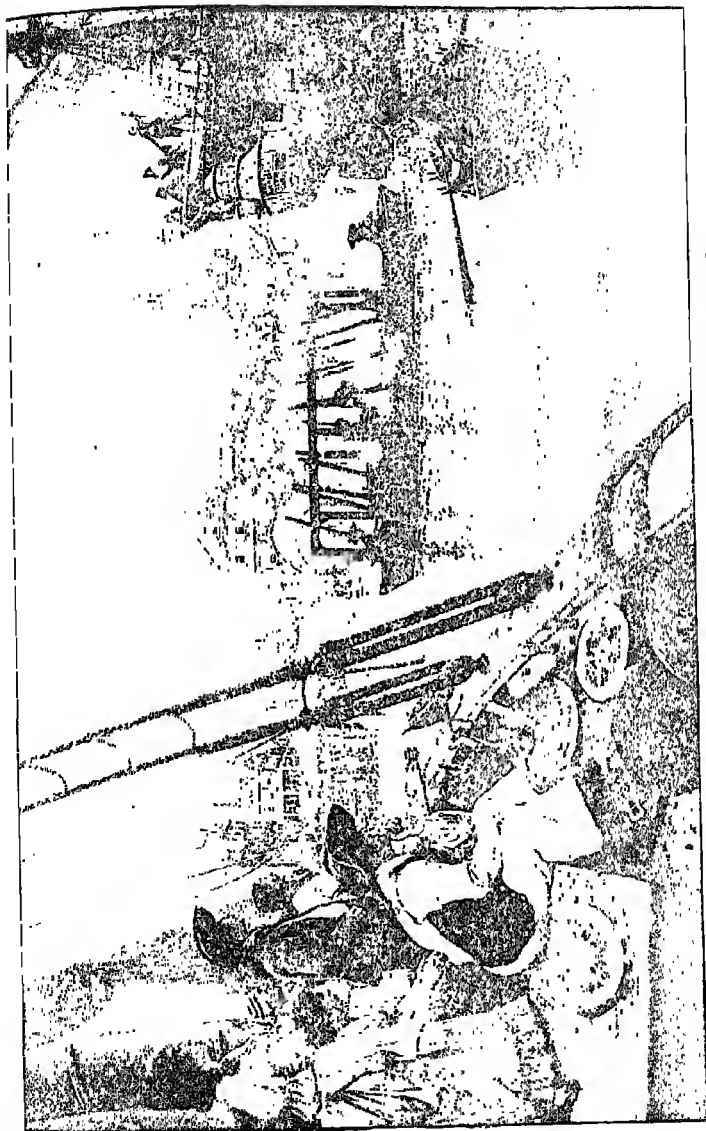


FIG. 75. This is the way the artist imagines the scene of the first trip of the steamboat made by John Fitch in 1783.

This strange-looking boat was Robert Fulton's steamboat, the *Clermont*, making her trial trip to Albany. A man who wrote about the excitement created said : "The whole country talked of nothing but the sea monster, spitting forth fire and smoke. The fishermen became terrified and rowed homewards. They were sure that their fishing grounds were being spoiled."

Soon Steamboats Were Seen on All the Large Rivers

Almost at once business men started steamboat companies on the chief rivers of the East. On the Hudson, Robert Fulton and his partner, Livingstone, started one of the first companies. For years they carried on almost all the steamboat trade on the Delaware, the Susquehanna, and the other rivers on the eastern slopes of the Appalachians.

Only four years after Fulton's success with the *Clermont*, the first steamboat appeared to the west of the mountains. One day in October, 1811, a crowd of people gathered on the shore of the Ohio River at Pittsburgh and looked with surprise at a little boat which lay on the water before them. It was the *New Orleans*, a steamboat owned by a man whom Fulton and Livingstone had sent to this region. Nothing like this had ever been seen in Pittsburgh before. The boat had a smokestack and two masts, and at the

stern was a paddle wheel. When it moved out into the water huge clouds of smoke poured out of the smokestack. The crowds on the bank cheered and cheered.

Down the Ohio went the *New Orleans*, causing great excitement at each settlement. From that time on, many steamboats were seen, and soon almost all the flatboats had disappeared from the rivers of the Mississippi Valley. A new day of river transportation in the valleys of the Ohio and the Mississippi had begun.

Early Steamboat Days on the Mississippi

"Grandpa, wasn't Uncle George a steamboat pilot on the Mississippi River?" asked Nancy Graham, as the family sat on the porch of the Graham home after dinner.

"Yes," said her grandfather. "My brother George steered boats on the Ohio and the Mississippi for years. Many's the story he has told me about his life on the river boats."

"Tell us about it, Grandpa," begged Nancy.

"When George was a young man, steamboats had not been in use for very long. My father and grandfather floated their crops down to St. Louis and New Orleans on flatboats or on rafts. At the end of the trip Grandfather used to sell his boats for lumber and walk back home. It was a long walk too — 1000 miles!

"But the steamboats could go *up* the rivers as well as down, and of course that made trade quicker and cheaper. About the time Fulton succeeded with the *Clermont*, thousands of people were moving into the Ohio and Mississippi valleys.

"Soon after that, steamboat building became a big business. Shipbuilders had to work night and day to keep up with the orders. The year George started steering boats, in 1840, nearly 5000 steamers were running on the Mississippi.

"Of course the cost to run one of these boats was rather high. The pilot and the crew got good wages, more than the men who work at these jobs get today. Your Uncle George used to get \$500 a month for six months' work. He got more than the captain."

"But why, Grandfather?" asked Nancy. "I should think the captain would get the most."

"No, indeed. The pilot had much more to do than the captain. He had the duty of guiding the ship. He had to be on the lookout for rocks and for changes in the stream. The Mississippi was a bad river for steamboating. The mud that came downstream piled up in places and often changed the direction of the river. We used to hear funny stories of some of these changes. A man who owned a farm in one state woke up one

¹From a painting made in 1853 by H. Sebron. It is now in Gibson Hall, Tulane University, New Orleans.

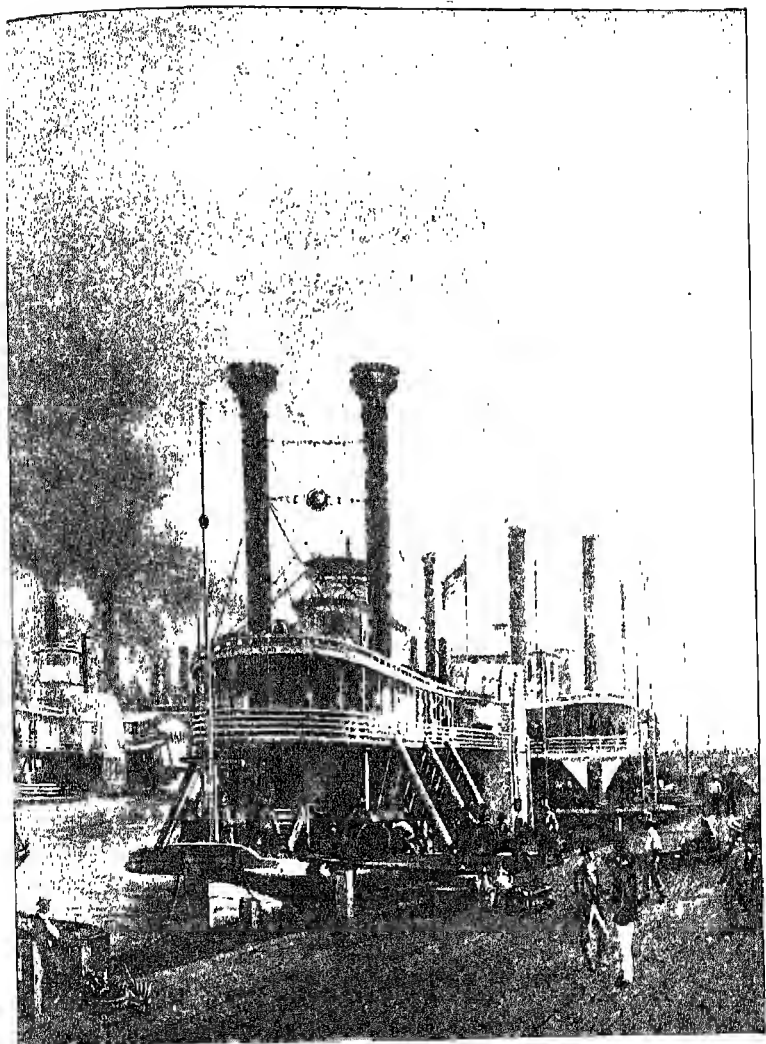


FIG. 76. Steamboats at the wharf in old New Orleans in the days when there was much traveling up and down the Mississippi River¹

morning and found that in the night the river had cut through the land so that his farm was no longer in that state. Isn't that a funny way to move from one state to another?"

"Doesn't the pilot get tired of making the same trip so many times?" interrupted Nancy.

"No, indeed, child. He must make it a good many times to be a good pilot. Mark Twain, the famous writer, was a pilot in those days. He had to pay \$500 to learn to be one. It took him a year and a half to know the river.

"One day Mark Twain asked his pilot-teacher, 'How on earth am I ever going to learn where this river goes?'

"'How is it that you can move through your own house in the dark?' asked the pilot. 'You can't see it. You know the shape of it.'

"'Do you mean to say,' continued Mark Twain, 'that I've got to know all the little changes in the banks of this river as well as I know the shape of the rooms in my home?'

"'Of course,' was the answer."

"How could a man pilot a boat in the dark, Grandfather?" asked Nancy.

"Just by long practice in doing it. It was hard work, Uncle George used to say. On a moonlight night the river looked one way; on a starry night

without a moon, it looked another. When it was raining or misty, shadows on the banks had to be watched for. Sometimes passengers would think they were headed straight for the shore, only to find that it was the way the river appeared when the shadows were on the water."

"Didn't they run into things and drown the people?"

"Yes, sometimes 100 people would be drowned on river steamers in one season. Boats would catch on fire, too, and people might be burned or drowned before the pilot could run the boat to the shore.

"Accidents sometimes happened because the pilots loved to race with one another. It was like two men driving fast automobiles today. Neither one wants to take the dust of the other man's car. What happens? A race, and sometimes a serious accident.

"Those pilots did love their boats — thought more of 'em than they did of anything else. They just couldn't bear to see another boat go by them. So when one boat tried to pass, the other boat would pile on more wood. Sometimes the crew would have to play a stream of water over the deck to keep the boat from catching fire from the sparks and pieces of wood that dropped out of the smokestacks. It was dangerous business; but races were held just the same, danger or no danger.

"One of the most famous of these races was the race between the *Grey Eagle* and the *Itasca* in 1856. One tried to beat the other to St. Paul with the news that Queen Victoria of England had sent a message by the new ocean telegraph (the submarine cable) to the President of our country. Both boats averaged thirteen miles an hour.

"Most boats carried an orchestra or singers. On some of them the Negro deck hands who did the work of loading and unloading furnished music all the time. Your uncle used to sing some of their old songs. They were a happy-go-lucky crowd; they never made more than one trip on the same boat. Just as soon as they were paid off they rushed for the shore to spend their money on a gay time. Of course it was easy to hire a new crew. All the chief clerk needed to do was to go out on the wharf and shout 'Men wanted,' and a crowd of Negroes who were 'broke' would jump toward him and promptly be hired for the trip.

"I traveled on one of these 'floating palaces' myself one time. I went from Cincinnati to New Orleans for about \$25. The boat was a big one; it had a fine cabin with good beds, just as good as those at home, and a big dining room. The people used to dance in the dining room every evening. After the dance those who could not pay for a cabin slept on the floor of this room. In the morning it was quite a job to get several

hundred of these sleepers up so that the tables could be set and breakfast served.”¹

Life on the Mississippi steamboats in the early days of our country was exciting and full of adventure, as the story of Nancy’s grandfather shows.

Canals! Canals! Canals!

*New York Led the Way by Digging the Erie Canal,
1817-1825*

But even the new steamboats did not satisfy the Eastern business men. They wanted cheaper ways of hauling freight. Philadelphia and Baltimore continued to get most of the Western trade, because the roads and the rivers led by shorter and cheaper routes to those cities.

It was for such reasons that New Yorkers like De Witt Clinton and Gouverneur Morris said, “Let’s dig a canal to connect Lake Erie and the Hudson River at Albany.” They had been studying the maps, and they saw that if a waterway could be built the farm products of the West could be brought cheaply to New York City all the way by water. They could be sailed

¹ This story was in part made up from facts about river steamboats in Archer Hulbert’s *Paths of Inland Commerce* (Yale University Press, New Haven, 1920) and George B. Merrick’s *Old Times on the Mississippi* (Arthur H. Clark & Company, Cleveland, Ohio, 1909). The latter contains the reminiscences of a former steamboat pilot and is a very interesting description of life on the river steamboat between 1825 and 1860.

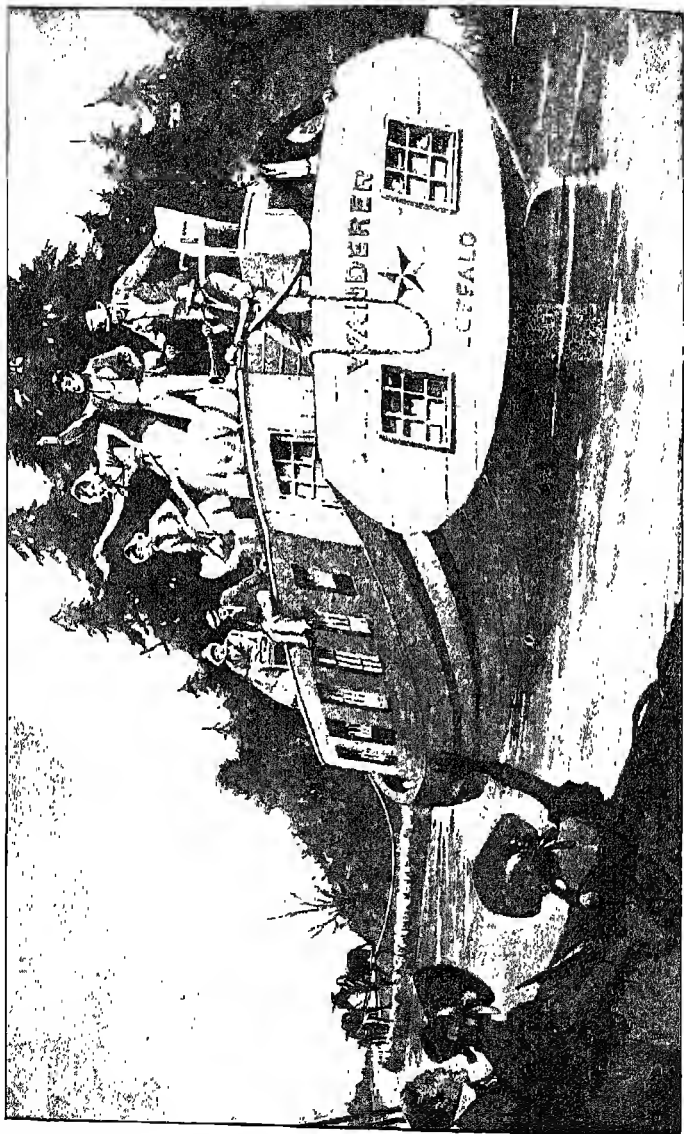


FIG. 77. This picture shows one of the early passenger boats on the Erie Canal. Notice that it is being towed by mules

through the Great Lakes on large steamers. At Buffalo, on Lake Erie, they could be put on canal boats and taken to Albany, then on down the Hudson River to New York City. Mark out this route on map 14, page 221. Do you see that instead of goods being transported hundreds of miles in wagons, they could be transported by water? That would be much cheaper than by land.

De Witt Clinton, who was afterward governor of New York State, did more than any other man to stir up the people of New York to get the trade of the Lake Erie region. He tried to persuade the officials to make the canal through the northern part of the state. For a long time he failed, but finally they agreed.

Even when the plows and scrapers were cutting the huge "river" across New York State, a river 40 feet wide and 10 feet deep, the people still laughed at the idea and called it Clinton's Ditch. But Clinton and his men went on with their plans, and in spite of people's ideas they succeeded. In 1825 — only seven years after they had thrown out the first spadeful of dirt — the water of Lake Erie flowed into the Hudson River. To celebrate this important event two kegs of Lake Erie water were taken through on the first fleet of boats. Governor Clinton himself emptied them into New York harbor. He did this to show the joining of the waters of the lake and the harbor.

Do you think that the Erie Canal helped business between the East and the West? It did, indeed. The whole freight business was changed by it. It cost less to send goods by boat, just as Clinton had said it would. Soon the business men of Philadelphia and Baltimore began to lose the trade of the lake regions to the New Yorkers. Year by year more boats and more freight came from the West to New York. There was more work to be done, and more people were needed there to do it. New York City grew and grew.

There were some business people in New York State who did not want to have the canal built because it would *hurt* their business. These were the freight handlers, who had built up a good business loading and unloading boats along the rivers. They saw that if the Erie Canal should succeed, their business would be ruined. The freight would be sent straight through without loading and unloading at many places. So these men did all they could to stop the work on the canal. In spite of them, however, it was finished.

You will read of many cases in which some of the people oppose new things. But history shows that when a new way of doing something really makes living cheaper and more comfortable the people will use that way sooner or later.

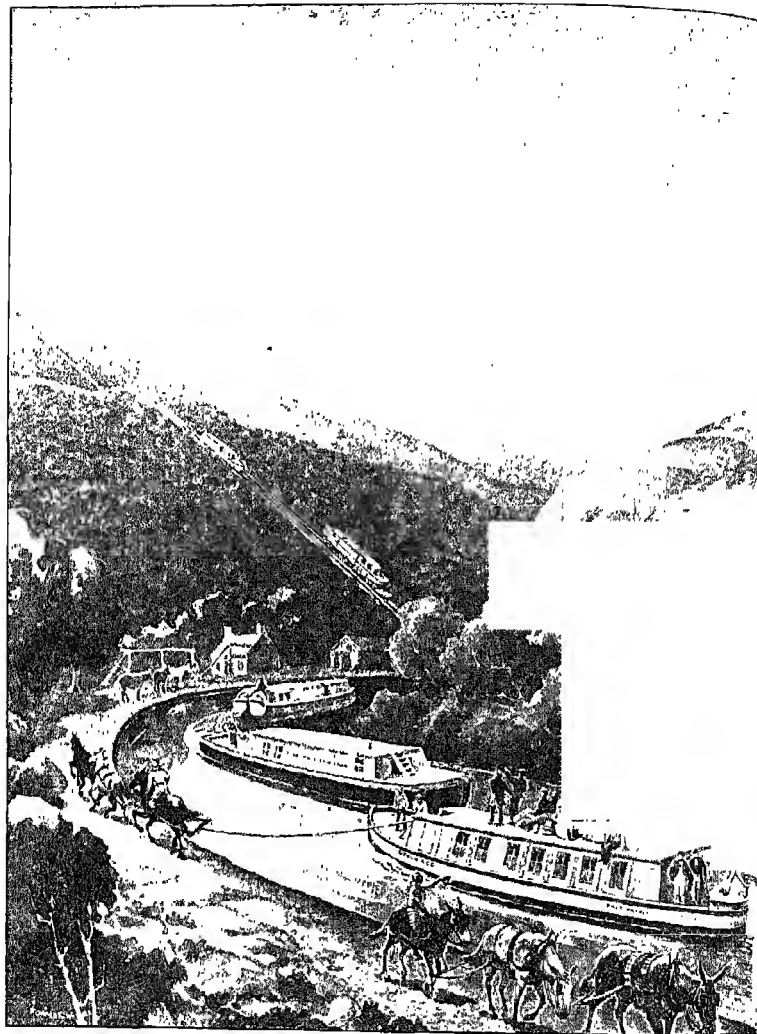
Canals through the Mountains

It was not long until the business men of Philadelphia, learning that New York was taking away their trade, also tried to "dig their way" to the West. The best route lay through the mountain valleys toward Pittsburgh. But, as map 14, page 221, shows, in order to get there one had to cross the mountains.

Between Philadelphia and Pittsburgh the mountains rise to a height of more than 3000 feet above the sea. It is interesting to remember that at no point is the land through which the Erie Canal passes more than 500 feet above sea level. However, 3000 feet is quite a barrier. But so great was the desire for a cheap and quick waterway to the West that the Philadelphians tried to dig a canal right through these mountains.

Geography Decided Where Canals Should Be Dug

Once more we see how geography helps to decide how people shall live. Roads had been built along the plains and valleys. They wound in and out among the hills. Now in building canals one could not dig straight through a mountain: one had to dig around it, rising gradually up the slopes. The best way, then, was to follow the river valleys, for the rivers always find the easiest slope up or down.



A drawing by Forrest Orr, based on an old print.

FIG. 78. Pulling the canal boats over the mountains to a canal on the other side. Does this seem an easy and cheap way of transporting goods?

So the canal of the Philadelphians went along the slope of the Schuylkill River. From there to Hollidaysburg, the route followed along the Susquehanna and Juniata rivers as far as the mountains would let it go. At Hollidaysburg the canal was 1000 feet above sea level. How to extend it through the mountains from Hollidaysburg to Johnstown was the great problem. The distance was only 40 miles, but a mountain wall 1500 feet high stood in the way!

The engineers finally decided to build railroad tracks over the mountain. Freight cars were pulled on the tracks to the top of the mountain by an iron "cable," or rope of wires, which was fastened to a steam engine. Once on top the cars coasted down the other side. Sometimes, as figure 78 shows, even the canal boats were dragged out of the water, put on the cars, and pulled over the top of the mountain.

Do you think this was a cheap way of shipping goods? No, indeed; it was very expensive. It meant not only towing the canal boats by horses or mules but also pulling them up over the mountains! For many years the people who lived on the route from Philadelphia to Pittsburgh tried to use this canal, but business through it was never very great. The Erie Canal, although a much longer waterway, made trade much cheaper.

But soon another new way of transporting goods was introduced. Railroads began to be built through

all these valleys. Then shippers began using the railroads and stopped using the Philadelphia Canal. Then the owners found that they were losing money, so they had to stop all work on the canal.

Baltimore Tried Canals Also

The business men of Baltimore also saw that if they were to trade with people on the other side of the mountains, some way must be found to bring Western goods to their city. So, without waiting to see whether or not the Philadelphians were successful, they too tried to dig a canal through the mountains.

The mountains were so steep, however, that it was even harder to cut a canal through them than it was on the Philadelphia route. Although the Baltimore men tried for several years, they never succeeded in joining the Ohio River with their city by means of a canal that would pay. Soon they were glad enough even to give up trying, for the Baltimore and Ohio Railroad was built through that region, and shippers began to send their goods by the railroads.

The New Cities of the Ohio Valley Built Canals

After 1825, as we already know, the region between the Ohio River and the Great Lakes filled up rapidly with new settlers. Millions of acres of land were put under cultivation. Factories were being built in towns;

iron and coal mines were being worked. People were moving West and cities were growing.

The whole central part of our country became a busy agricultural and manufacturing region. This meant that each year there was more and more freight to be carried from state to state. So rapidly did this happen that railroads, roads, and waterways could not be improved and extended rapidly enough to take care of the trade.

People who were looking for cheap water transportation dug canals which joined the rivers with each other and with the Great Lakes. By 1850 canals had been dug even as far west as Illinois, and all the principal rivers and the Great Lakes were joined together.

So it was that water transportation kept pace with land transportation.

Books You Would Like To Read

- BRIGHAM, A. P. From Trail to Railway. Ginn and Company, Boston. See Chapter IV for the story of the Erie Canal.
- COOLIDGE, ANNE, and BONA, A. di. Story of Steam. The John C. Winston Co., Philadelphia. How the steam engine works.
- PERRY, F. M. Four American Inventors. American Book Co., New York. See the story of Fulton and the invention of the steamboat.
- STONE, G. L., and FICKETT, M. G. Days and Deeds a Hundred Years Ago. D. C. Heath and Company, Boston, 1906. See pages 78-93 for the story of Fulton and his steamboat; also see pages 94-102 for a description of a canal journey in the early days.

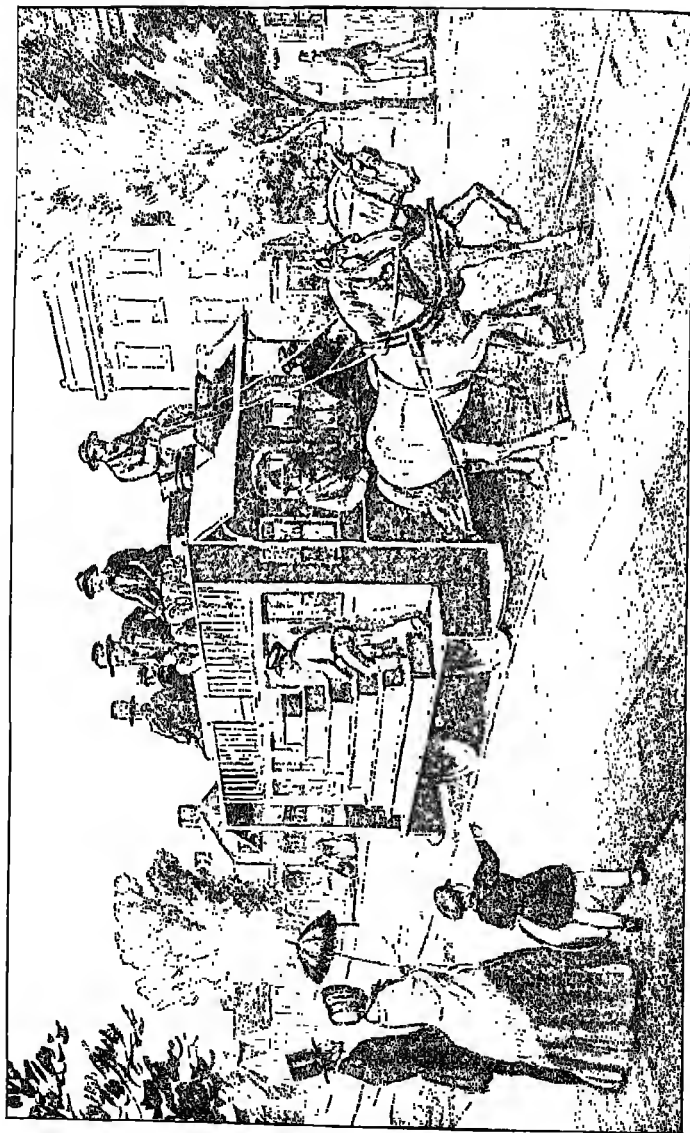


FIG. 79. An early streetcar drawn by horses¹

CHAPTER XVI

The Iron Horse : Railroads Join East and West

NOW THE business men of the Eastern cities had river steamboats, smooth roads, and canals. But still they were not satisfied; they wanted even quicker and cheaper transportation.

One other thing remained to be tried—railroads. The Baltimore people said: "Let's build a railroad to Pittsburgh. It can be built in one third the time that it takes to build a canal. It will cost much less because the work can be carried on by a smaller number of people. It will not freeze over in winter as do the canals, preventing the hauling of freight during several months each year."

So the business men of Baltimore and other cities of Maryland formed the Baltimore and Ohio Railroad Company. On July 4, 1828, they broke the ground for the building of the first great railroad in the United States.

Experiments with Funny "Railroads"

Of course people had been trying to move wagons on tracks for a long time before this. Even before steam engines were used cars were drawn by horses over

¹ Redrawn from Dunbar's *History of Travel in America*.

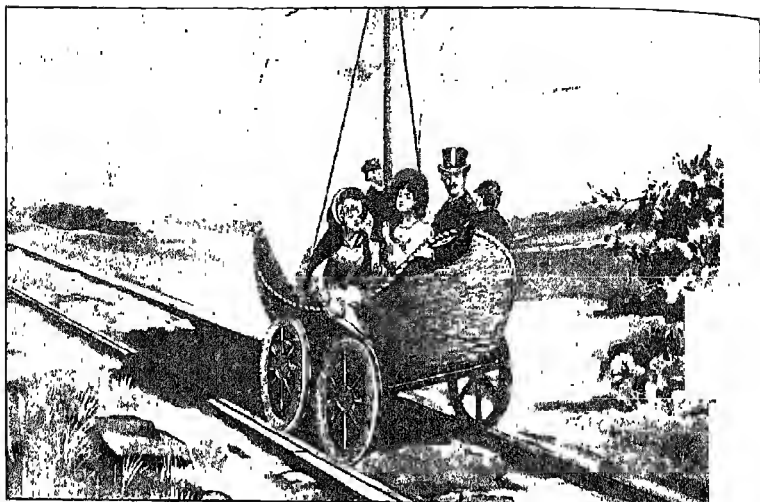


FIG. 80. This is an artist's picture of the way a "sail car" looked¹

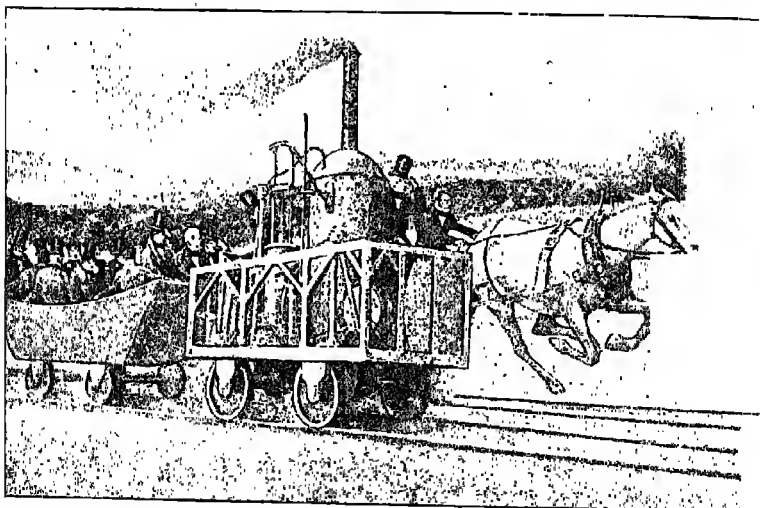


FIG. 81. The race between Peter Cooper's engine, the *Tom Thumb*, and the stagecoach horse, August 30, 1830¹

"rails." To us the tracks would have seemed amusing. They were made of stone blocks or wooden planks with iron strips fastened to them. The wheels moved on these strips. Even on the Baltimore and Ohio Railroad it was intended to have horse-drawn cars at first. Both in England and in the United States such cars were being used to carry stone from quarries and iron from mines. As the years passed, horse-car tracks were laid in towns and cities for passenger service.

Many funny cars appeared on these first tracks. One of these was the "sail car," which had a sail like a ship. It was found that a high wind would move the car on smooth plank rails (see figure 80). Of course no one really expected to be able to force such cars uphill or over the mountains, and, of course, no one did.

But animals or the wind were really too slow and uncertain for the needs of growing cities. So the people turned more and more to the new steam engines. By 1830 several men had invented steam locomotives that were able to pull trains uphill as well as on level ground. The one that attracted the most attention was invented by Peter Cooper and was called the *Tom Thumb* (see figure 81).

¹ Courtesy of the Baltimore and Ohio Railroad.

Which Was Faster: the Steam Horse or the Live Horse?

As usual there were certain business men who were disturbed over the success of the steam locomotives. These were the owners of the stagecoaches which traveled over the new turnpike roads connecting the Eastern cities. These men saw that if railroads should be successful, passengers and freight would be carried on them. This might even drive them out of business.

The owners of the stagecoaches decided, therefore, that they must convince the people that horse-drawn coaches could travel as rapidly and safely as steam locomotives. One of them dared Peter Cooper to drive his "steam horse" in a race with a real horse (see figure 81). Cooper accepted the dare. Here is what happened:

When the word "Go" was given, the big gray horse chosen to show the slowness of the clattering engine sprang away on the instant. Speedily he got a lead of about a quarter of a mile. Then the engine got up enough steam to move ahead. Slowly it began to gain, and after several miles it overtook the wagon on the other track.

The driver lashed his horse again and again, and for a time the horse actually drew his load as fast as that of the engine. Slowly, however, he began to lag behind, and it seemed that victory was about to go to

the engine when suddenly something went wrong with the locomotive. A leather band had slipped from its wheel.

Now the engine slowed down. With all his strength Cooper tried to put the flapping band back in its place. He even injured his hands in trying to do so. All in vain, however. The engine stalled, and the horse dashed ahead and easily won the race.¹

This race seemed to prove to many people that horses were better than engines, so they continued to depend upon the stagecoaches and the horse-drawn cars. For many years, indeed, the owners of stage-coach lines got a very large share of the passenger and freight business.

Gradually, however, locomotives were improved, and within a few years steam engines were traveling as fast as fifteen or twenty miles an hour. This was too fast for the stage companies, and they began to lose most of their business. Then the new transportation really began to take the place of the old.

Railroad Travel 100 Years Ago and Today

On an August day in 1831 the *De Witt Clinton*, one of the first engines, started from Albany, New York, on its first trip. The conductor, or "captain," as he

¹ Adapted from Dunbar's *History of Travel in America*. Copyrighted and published by the Bobbs-Merrill Company. Used by special permission.

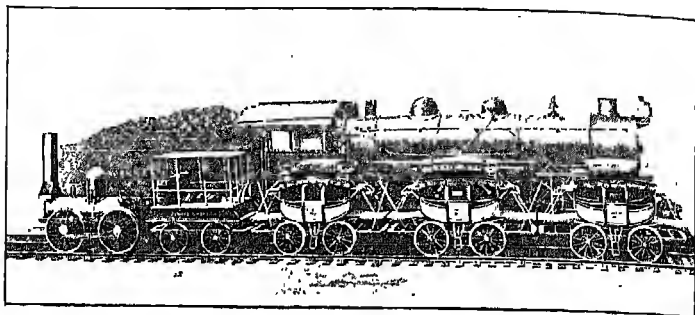


FIG. 82. Compare the *De Witt Clinton* locomotive and coaches shown in this picture with the modern locomotive¹

was called, rang a huge bell. The engineer threw in the throttle, and the train jumped forward.

Even the captain was not prepared for what happened. When the engine started, the fuel car pulled the first passenger coach forward with a jerk. The captain fell backward out of his seat, but luckily he seized a post just in time. The passengers, who were used to the slow movements by which horses get under way, were completely taken by surprise. As the first car was bumped along the rails, men and women were thrown backward over seats and piled in heaps on the floor.

The whole train did not start at the same time. First one car moved and then the next, for each was joined to the one in front of it by an iron chain. There-

¹ Courtesy of the New York Central Railroad.

fore it took some time for the whole train to get straightened out, but in the end it rolled on smoothly enough.

Then suddenly more trouble arose. As you know, wood was burned in the engine, and soon the smoke-stack was pouring out clouds of smoke and a rain of sparks. The sparks blew out in all directions and dropped among the passengers. The first three coaches had roofs on them, so only a few sparks blew in through the side openings.

Imagine the excitement, however, on the uncovered cars behind. Men's coats and hats and women's clothing burst into flames. Some of the passengers raised their umbrellas against the clouds of smoke and fire. The umbrellas too began to burn. By the time the train was on its way each traveler had made of himself a volunteer fireman, putting out the flames on his neighbor's back.

When the train arrived at the tank that had been placed beside the track to supply the engine with water, the engineer threw on the brakes. To his surprise and pride the machinery worked perfectly. But with what sad results! The fuel car crashed into the engine, the first coach into the fuel car, and so on down the length of the train. Passengers, in the meantime, were thrown in every direction.¹

¹ Adapted from Dunbar's *History of Travel in America*. Copyrighted and published by the Bobbs-Merrill Company. Used by special permission.



FIG. 83. Hardships of early railroad travel

Robert Lawton

Is that first trip of the *De Witt Clinton* much like the run of one of our speedy and comfortable trains today? When a train starts from the station, do we expect to be thrown out of our seats or to be hit in the face with a rain of sparks? No, indeed. Many engineers are proud of the fact that they can start a heavy train of ten or fifteen coaches and Pullman cars so evenly that passengers will not know that the cars are moving.

This did happen not so long ago when a train bound for California pulled out of the Northwestern Station in Chicago so smoothly that a Pullman porter who should have been on board was left standing beside the tracks. He did not even know that the train had gone!

As for stopping these huge vehicles, an engineer today can put the brakes on the wheels of every car on the train at the same moment. The passengers sit back in comfortable chairs, protected from fire, winds, snow, or rain by large glass windows.

The Waste of Many Little Railroad Companies

After 1831 the race of the Eastern cities for the Ohio valley trade continued. The business men of New York and Philadelphia as well as of Baltimore formed railroad companies to be the first to cut through the Appalachian Mountains with railroads. Where possible the railroads were built, like the canals, where

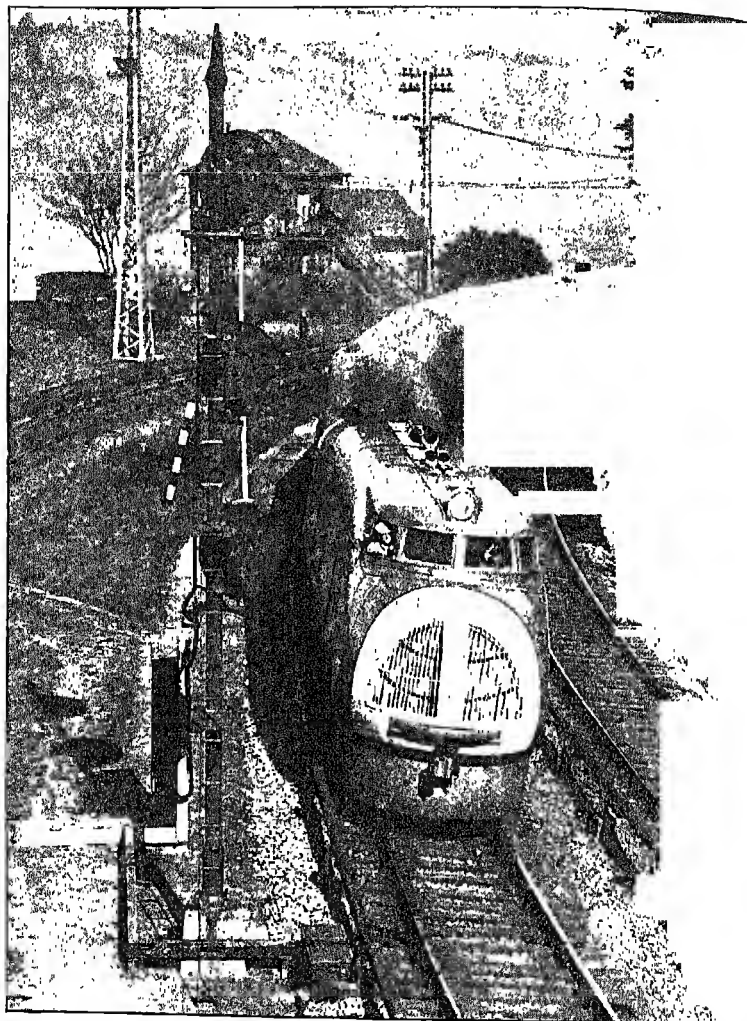


FIG. 84. Trains are still being made larger and better. This picture shows one of the newest kinds. Compare it with the *De Witt Clinton* in 1831

Wide World

nature made it easiest. They followed the river valleys and the more level places. Along the Hudson River, the Susquehanna, and the Delaware, through the Mohawk valley, many small sections of railroad track were laid.

These little railroads were not built all at once. Most of them were constructed by companies formed in small cities and towns to connect them with other cities and towns. The cities of Buffalo, Albany, and New York, 365 miles apart, are good examples. The business men of Albany and Schenectady built the first of these short railroads, the "Mohawk and Hudson," between their two towns. It was seventeen miles long. A few years later another company built a track from Schenectady to Utica. In the meantime, from the western end, Buffalo companies were building tracks eastward toward Albany. Year by year the gap between these pieces of railroad was cut down. By 1842, railroad tracks had been laid all the way from Albany to Buffalo, but they were owned by eleven different companies!

At the same time other companies were building tracks along the Hudson River from New York City to Albany. By 1851 one could travel all the way from New York to Buffalo by rail.

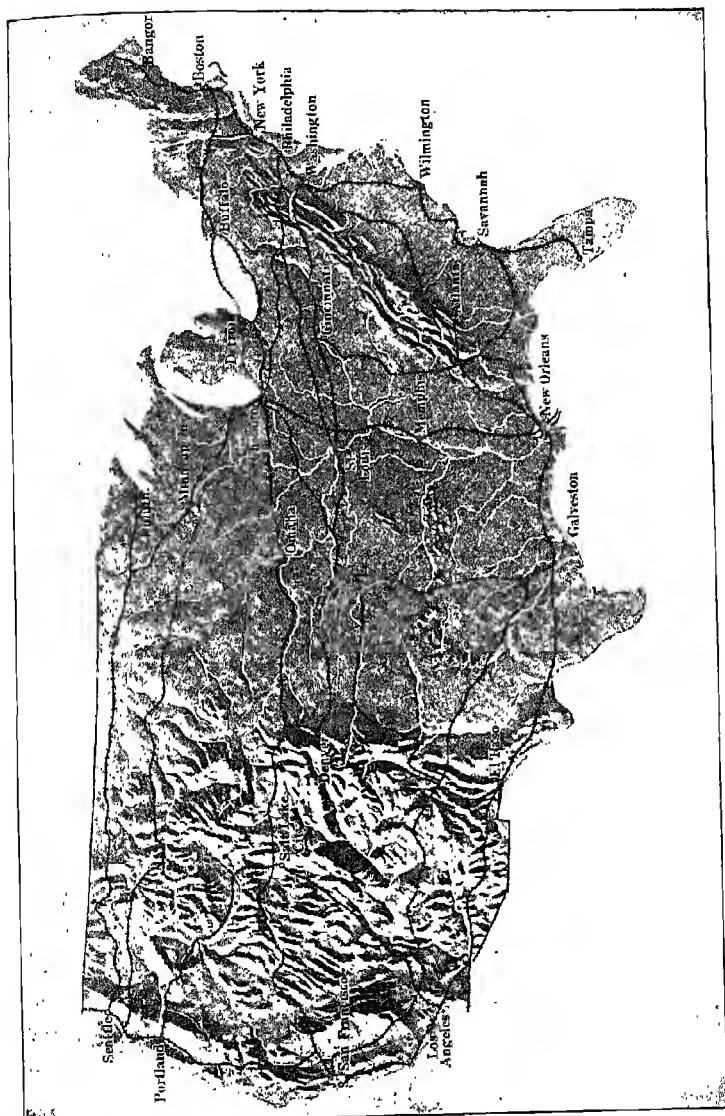
Then the business men of Ohio, Illinois, and other Western states also formed companies and built railroads between their communities. Even west of the

Mississippi River farmers and business men were joining hands to lay their own pieces of track. By 1860 one could travel and ship goods by railroad from the Eastern cities to Chicago and the other cities of that section.

Can you see how wasteful was this way of building railroads? Each company had built its railroad according to its own plans, so there were many differences between them. Even the width of the tracks differed. Some were four feet six inches wide; others were four feet eight inches wide; still others were even as large as five and a half feet wide.

The wheels of the cars and locomotives which belonged to one company would not fit the next one. If you had traveled by rail between Albany and Buffalo 75 years ago, you would have had to change cars eleven times! Think what this meant in shipping freight. Think of the extra time in handling the goods and the chance of breaking things, to say nothing of the delays! Of course the freight handlers liked it, for it gave them work to do, but nobody else did.

Such a wasteful way of managing a railroad could not last long. By 1870 wealthy business men began to form new companies and to buy up the little separate railroads. These they would bring together into a single large railroad system. For example, about 1870



MAP 16. The principal railroad systems of the United States

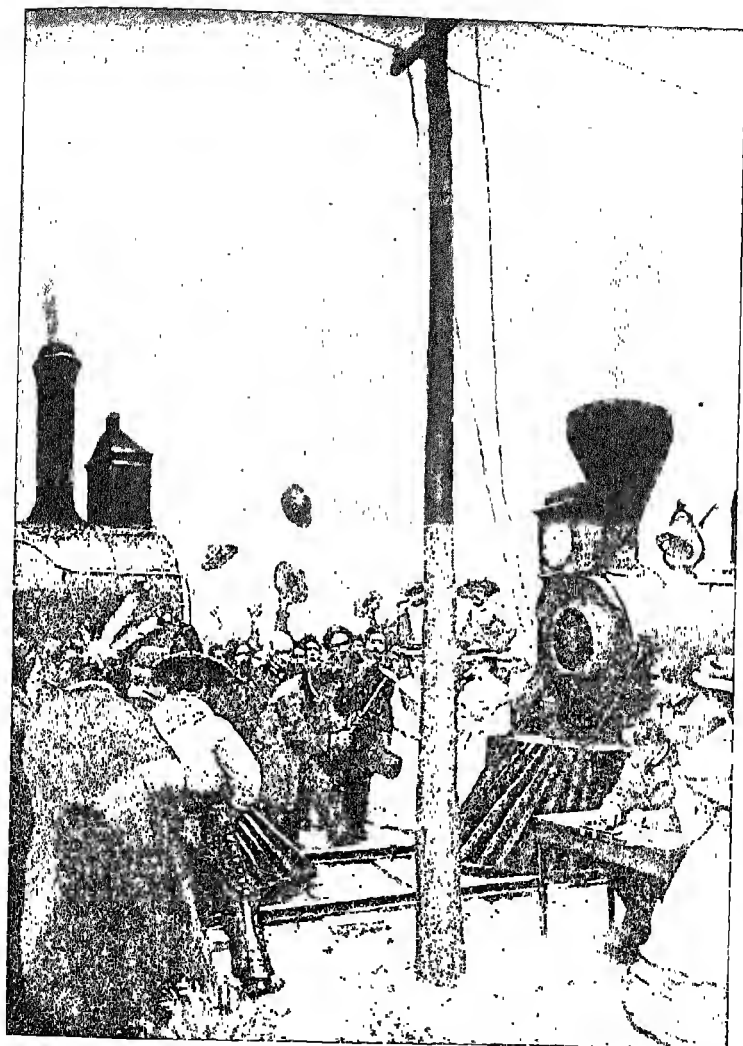
Cornelius Vanderbilt bought the little railroads between New York City and Buffalo and joined them into the railroad system now known as the New York Central. Later the same company bought many other little railroads in the Middle West. Today the New York Central, with many branch lines, makes up a system of several thousand miles of track.

When these railroad companies were joined together, the width of the tracks for all these railroad systems was made the same — four feet eight and a half inches. The locomotives and cars of any one railroad company could then roll over the tracks of any other company. No longer did passengers have to change cars many times; no longer was it necessary to load and unload freight so often.

In 1869 Railroads Joined the Atlantic and the Pacific

During all these years of railroad building in the East new settlers were moving into the plains and mountains beyond the Mississippi. The prairies between the Mississippi and the Rocky Mountains were slowly filling up with people. Even California and Oregon, beyond the Rockies, were growing.

These far-off places needed ways to connect them with the East. Highways were poor and horse-drawn vehicles were slow. They could carry little freight. Heavy and bulky things had to be transported by



N. C. Wyeth

FIG. 85. Driving the last spike on the first cross-country railroad, in 1869. Why did the people all over our country celebrate this happening?

boats around South America to the settlements on the western coast.

Soon people began to see the need of having a railroad from coast to coast. They saw that goods could then be shipped from San Francisco to Eastern cities in much shorter time than by boat around Cape Horn. The officials of the United States government also saw how important a railroad across the continent would be.

About 1862 two companies began to build the first such railroad. One company started at the Pacific coast and went eastward. The other began in Iowa, where the eastern rail lines ended, and went westward. The two railroad gangs worked toward each other at top speed, fighting Indians as well as measuring and laying the rails.

On May 10, 1869, the two groups met, and the tracks of the two companies were joined at Promontory Point, Utah. The first cross-country railroad was finished. The event was celebrated there as one of the most important in our history. East and West were tied together.

Books You Would Like To Read

HENRY, R. S. *Trains*. The Bobbs-Merrill Company, Indianapolis.
History of railroads in America.

NATHAN, MRS. A. G., and ERNST, M. S. *The Iron Horse*. Alfred A. Knopf, Inc., New York. An interesting history of the locomotive.

Railroads Join East and West 291

- SWIFT, H. H. *Little Blacknose; the Story of a Pioneer*. Harcourt, Brace and Company, Inc., New York. The story of the *De Will Clinton*, the first locomotive on the New York Central Railroad.
- STONE, G. L., and FICKETT, M. G. *Days and Deeds a Hundred Years Ago*. D. C. Heath and Company, Boston, 1906. See pages 112-120 for a description of an early railroad.
- VAN METRE, T. W. *Trains, Tracks and Travel*. Simmons-Boardman Publishing Co., New York. The story of travel by train, and trains today, with many illustrations.
- WEBSTER, H. H. *Travel by Air, Land, and Sea*. School edition. Houghton Mifflin Company, Boston. The history and description of travel by airplanes, railroads, ships, and by other means.



FIG. 86. As an artist imagines Samuel F. B. Morse at work on the first telegraph

Rodney Thomas

CHAPTER XVII

Sending Messages by Electricity

NOT ONLY were inventions changing the ways of sending people and goods, but ways of sending messages were becoming more rapid with the passing of each year. Let us see what they were.

1. The First Electrical Telegraph

In 1832 Samuel F. B. Morse, a portrait painter, was returning on a steamer from Europe. On the ship he met a fellow passenger who, like himself, had been studying in Europe. While Morse had been studying painting, the other man had been studying electricity. He had brought back with him a strange-looking instrument called an electromagnet. Morse examined this with great interest, for he had given some time to studying electricity while he was a student at Yale.

Almost at once he was struck with a new idea. He said, "I believe electric signals could be sent long distances over wires by means of this magnet." He was so sure that it could be done that he said to the captain of the ship, "If you should learn of the invention

of an electric telegraph one of these days, remember that the real discovery was made on board your ship."

After Morse arrived in America he spent almost all his time trying to invent a telegraph that would work. But his difficulties were many. He was poor and he knew little about science or mechanical things. In order to earn his living he became a professor of art in the University of the City of New York. The university also gave him a chance to carry on his work. Helped by one of the professors of science, he experimented with his invention for three years.

When the first telegraph was finished, Morse showed how it worked before groups of people in public. He tried to get money from wealthy people and from the government to build a line of telegraph wires. Eleven years were to pass, however, with one disappointment after another.

But just as Morse was about to give up hope, the government gave him \$30,000 to build a line of poles and wires from Washington to Baltimore.

After long and hard work the new line was completed. On May 24, 1844, Morse himself telegraphed the first words to be sent by wire. They were "What hath God wrought!" Morse was at the Capitol at Washington, and he sent the message to his partner and helper, Theodore N. Vail, at Baltimore. Vail tele-

graphed the words back to Morse. Success at last! Sounds were sent long distances over wires for the first time in the history of man.

A person at one end of the wire pressed a button called a key, and at the other end of the wire a sharp point came down and made a dot on a moving strip of paper. If the key was held down, the dot became a line. Different arrangements of dots and lines stood for letters. But soon the telegraphers learned to understand the sounds the point made as it clicked down, and began to find it easier not to use the paper.

Did the Telegraph Change Ways of Living?

The telegraph came in 1844. At first, as with most inventions, it received little attention. Within a few years, however, people began to see how valuable it could be. A message could be sent hundreds of miles and an answer be received on the same day. Was there any reason to wait when messages could be sent so quickly?

Soon business men were ordering their materials and goods by telegraph. Families sent important messages by telegraph. Railroad companies sent information about trains. Newspapers got their news more quickly than by any other way.

It was not long before cities and towns were tied together by wires, and business could be carried on

with greater speed. The railroads and good roads had made it possible for people to travel from one part of the country to another. Now the telegraph was making it possible for them to send messages quickly from one place to another.

2. 1876: Words over Wires for the First Time

As we said before, the telegraph sent electrical waves which moved a little iron arm at the other end of a wire. It could not send the sound of the voice. Men could not yet speak to each other over long distances.

In the year 1875, while the telegraph was still one of the most wonderful things in the world, there was a young professor of music in Boston University whose name was Alexander Graham Bell. Bell had a workshop in the attic of a house in one of the side streets of Boston.

In this workshop was a queer machine — a sort of harmonica with a clock spring, a reed, a magnet, and a wire. For almost a year Bell had been trying to make this instrument send different kinds of sounds over a wire. But for 40 long weeks it would only gasp and make queer noises. No words or sentences would come out clearly.

Then came the great day, March 10, 1876, when the machine *talked*. On that day Thomas A. Watson, Mr. Bell's assistant, had run a wire from the workshop



FIG. 37. Alexander Bell before an audience in Salem, Massachusetts

in the attic down two flights of stairs. Mr. Bell was at his instrument in the attic. He spoke into it. Watson, two flights below, had the receiver at his ear. "Mr. Watson," he heard clearly, "please come here. I want you." Watson dropped the receiver and, wild with joy, rushed up the stairs to tell Bell the glad news. "I can hear you!" he shouted, out of breath. "I can hear the words!"

Bell's efforts were successful. The telephone had been invented!

Did People Think That the Telephone Was Useful?

Even after Bell had invented the telephone, people were not interested in it. Almost no one thought it would have any real use. Many people said it was humbug, a trick. "It is impossible to talk over a wire," they declared. Others said, "It is only a toy; it can never be of any real use."

People laughed at Bell as they had laughed at many other great inventors.

Bell knew that people would not use the telephone until they were made to understand what it would do. So he and Watson went about giving lectures and showing the new instrument. At one of his lectures a band played "The Star-Spangled Banner" in Boston. The music was heard by an audience in Providence, Rhode Island. "Hearing *was* believing!"

One day a Japanese student startled Mr. Bell with the question "Will the telephone speak Japanese?" He seemed surprised when Mr. Bell told him that it would. He brought two Japanese friends and, after trying the telephone out, decided that it could be used even in Japan! Bell asked two of the Japanese gentlemen to take part in one of his lectures. This helped to prove to people that any language could be spoken over the telephone.

Improvement of the Telephone

The struggle to make the telephone a perfect instrument was a long and hard one. Improvement came only after many inventions. Switchboards were devised to connect many telephones, cables carried wires underground, and all parts of the telephone were improved.

As telephones became better, people began to use them. Before 1876 there had not been a telephone in the United States. By the end of that year there were nearly 2600 telephones being used; 50 years later there were more than 17,000,000! At last it became possible for any place in the United States to be connected with any other place.

3. The Wireless Telegraph and the Telephone

Does it seem possible that still more marvelous inventions were to follow? They did! The telephone had scarcely come into use when inventors discovered how to send messages *without wires!*

In the year 1895 Guglielmo Marconi, a young man of twenty-one years, succeeded in sending messages by telegraph clicks over a distance of several hundred feet without the use of wires. That was the first wireless telegraph. Within a year Marconi had so far improved his instrument that he was sending messages



© Pach Brothers

FIG. 88. Guglielmo Marconi, inventor of the wireless telegraph over a distance of ten miles. Three years later (1899) he sent a message across the English Channel, a distance of twenty-four miles. With each new experiment points farther and farther away were reached. But Marconi's dream would not be complete until he sent wireless messages across the Atlantic Ocean.

In December, 1901, a very powerful sending machine was put up in England, ready for the great transatlantic test. The test was to send three clicks (which

meant the letter "S") across the ocean at certain times each day. Marconi, who was to receive the messages, waited in a little shack in Newfoundland, off the coast of Canada. His assistant was to send the signals from England.

The time for the message drew near, the time toward which Marconi had worked and planned. At last some sounds — *click-click-click* — in the receiver! "S"! That was it! Marconi listened; all was quiet. Then clearly the sounds came again from across the Atlantic — three clicks! Again and again came the letter "S" into the receiver.

Once again North America and Europe were brought closer together. This time the tie that connected them was unseen waves traveling through the air.

Wireless stations were built along the coasts of Europe and America, and messages began to flash back and forth between the continents. Soon ships had wireless sets, and all sorts of messages were being sent. Passengers in the middle of the Atlantic could now speak directly to people on both sides of the ocean. Captains of ships could be told what kinds of weather they would meet, and changes in sailing orders could be given to them.

The importance of the wireless telegraph was not fully understood, however, until a serious accident



FIG. 89. This reminds us that by means of messages sent by electricity the country and the city, the factory and the farm, all the parts of our country, are connected with one another¹

occurred to a ship nearly eight years later. Early one morning in January, 1909, the operator in charge of the Nantucket Island wireless station heard a call for help, a "distress" signal, from the large steamship *Republic*. The wireless operator on board the *Republic* told the shore station that his ship had hit another ship, and that both needed help.

Within five minutes after the message had been received, the operator at Nantucket had sent wireless messages to the other ships that were near, and five of them were steaming rapidly toward the scene of the

¹ Courtesy of the American Telephone and Telegraph Company.

accident. They found the damaged ships and rescued the people on board. Then people everywhere saw what a wonderful way of sending messages the wireless was.

Today, because of wireless, ocean travel is much safer. No ship at sea need ever be out of reach of other ships or of stations on shore. News from "the four corners of the earth" is broadcast to houses in every continent and to ships in every sea.

In *The Story of Man at Work* we shall read many more stories of how our people learned to keep in close touch with one another, even though their communities were in distant parts of the continent.

Books You Would Like To Read

- AULAIRE, MRS. I. d', and AULAIRE, E. P. d'. *Conquest of the Atlantic*. The Viking Press, New York. See the story of the laying of the Atlantic cable and that of the wireless telegraph.
- PERRY, F. M. *Four American Inventors*. American Book Co., New York. See the story of Morse and the invention of the telegraph.
- STONE, G. L., and FICKETT, M. G. *Days and Deeds a Hundred Years Ago*. D. C. Heath and Company, Boston, 1906. Pages 121-130 tell the story of the invention of the telegraph.
- STOUT, VELMA. *Wires Round the World* (one of Our Changing World Series). Thomas Nelson & Sons, New York. A well-written and interesting history of the telegraph.
- WEBSTER, H. H. *The World's Messengers*. School edition. Houghton Mifflin Company, Boston. How men communicate with each other. See especially the story of the telephone and that of the telegraph.

PART V

The Last of the Westward Movement

SO far our stories have shown us how our people settled the land to the Mississippi River. While the frontier was moving westward thousands of villages and towns to the eastward were being bound together. Better roads carried freight and passengers. Steamboats on the rivers and barges on the canals gave even cheaper transportation. Then came the railroads, very much quicker than anything used before. At last the electric telegraph and telephone were invented.

Most of these things took place before 1850. Even the new electric telegraph was a success by the time the pioneers were crossing the prairies and the western mountains.

But the westward movement still continued long after 1850. Across the Mississippi it went, over the buffalo and Indian plains, over the Rockies, and across the big plateau between the mountains. To the story of this last step of the westward march we turn in the next three chapters.



FIG. 90. The "Bird Woman" pointing out the trail to the Far West to Lewis and Clark. The man at the right of the picture is Charbonneau.

CHAPTER XVIII

Settling the Last Frontier: From the Mississippi to the Pacific

ONE MORNING in 1799 the people of a little frontier town in western Virginia were gathered along the bank of the Kanawha River. The news had spread through the town that Daniel Boone, "Old Daniel," as he was called, was going West.

"What are you going West for at your age?" asked a neighbor near whom he had lived for 20 years.

"Too crowded here," Boone answered. "Can't stand it to live in a town. I want more elbow room."

Old Daniel had watched uneasily the travelers who went by on foot and on horseback. Women and children, carts and wagons, had followed along the trails that had become roads. Kentucky, western Virginia, Ohio, Indiana, and Illinois were filling up.

Some clever Eastern businessmen had taken part of Daniel's own land in an unfair way. "High time to be moving," he said after that happened. The family agreed. They would move out West, where they could hunt buffaloes, grizzly bears, and deer.

* ¹ A painting by E. S. Paxson in the Montana State Capitol. Reproduced by permission of Jorud, Helena.

So on this morning in 1799 they loaded their household goods and cattle on flatboats and floated down the Kanawha and into the Ohio. As they passed one settlement after another, the people came down to the banks to see this old hunter and trail-blazer. Everyone in the West had heard of Daniel Boone.

For weeks the Boones drifted down the Ohio and into the Mississippi. Even along the river, towns were growing. The biggest one was St. Louis, which had begun as a little village long, long before. It was located high up on a bluff near the place where the Missouri flows into the Mississippi. Even at that time it had some rather large buildings.

Boats of every kind were passing up and down the Mississippi, carrying the things to be sold in one town or another. Early in 1800 a man who lived on the Mississippi River wrote of the things that were happening around him: "I saw a hundred persons passing through my Missouri village in one day. There were nine wagons, each one harnessed with from four to six horses, and with a hundred cattle, horses, and sheep with each wagon. Lots of them had slaves, three or four, even twenty. It was an exciting procession. The Negroes were delighted with their traveling West. Bells which hung from the wagons were ringing. Women and children were trudging along behind. One procession was nearly a mile long."

At nightfall one could see these caravans stop and make camp. The dogs would bark, gathering the cattle together in one spot. Harnesses were removed so that the horses might rest. Cooking things were unpacked, and slaves would then prepare supper. After the meal the white folks gathered around and talked over the events of the day. Often they wondered what would happen on the next day, as they went farther west.

So it was that even by 1800 the Mississippi Valley, with its great river, was becoming a busy region. Indeed, it was too busy for the Boone family. They left St. Louis and turned westward. On up the Missouri they traveled, to the last frontier, the very edge of settlement. There they made a new home. Once more Old Daniel had "elbow room" in the midst of broad plains, huge forests, and the animals that he loved so well.

Lewis and Clark Blazed the Trail to the Pacific

On a May morning in the year 1804 three boats were lying on the eastern shore of the Mississippi, at the spot where the Missouri emptied its water into that great river. One of them carried a sail and had oars—twenty-two of them. There was a cabin too. The other two were small, canoe-like boats with six and seven oars each.

On that morning the boats began to move out into the river, and soon they turned toward the mouth of the Missouri. They were on a great adventure. The band of men whom they carried were trying to reach the far-off shores of the Pacific Ocean. Never before had that part of the continent been crossed. Of the mountains and the plains and the deserts which lay between the Mississippi and the western coast, men knew little.

Into the Missouri River moved the three boats with their passengers. At the head of the band of explorers were Meriwether Lewis and William Clark. Young men of the frontier they were, well fitted for leading the adventure. With them were men from the Kentucky frontier and the Western forts.

Under a gentle breeze the three boats went up the Missouri, past the little scattered settlements. After four days they reached Daniel Boone's cabin. This was the frontier. Beyond lay the unknown.

As they moved on through the country which is now Missouri the explorers met traders and trappers. Deer and wild turkey, black bear, and beaver supplied them with meat. As the river wound through the plains they found huge herds of buffalo and many elk.

Farther and farther north went the travelers, through the Dakotas. When winter came they stayed



MAP 17. The Principal Trails to the West

among friendly Indians, hunting the buffalo and talking with the Indians and hunters and traders. Sometimes there was dancing to the tune of the fiddle. In the spring they were on their way again. With them went a French-Canadian trapper named Charbonneau, who was to be their guide, and his Indian wife, known as "the Bird Woman" (figure, 90).

The daring explorers had many exciting adventures. Several times they were attacked by the fierce bears of the forest. Once when their guns were not loaded they were forced to climb trees to escape the animals. At another time they had to swim across a river to escape them. At night they often slept under a tree, only to wake in the morning to find rattlesnakes coiled on the ground near by.

Week after week they continued up the Missouri River until it led them into the Rocky Mountains almost to what is now the boundary line of Canada.

It was in June that Lewis, pushing ahead on foot, heard the roaring of waters. Above the plain he saw the spray rise like smoke and then disappear. He hurried on and saw the falls which are now named the Great Falls of the Missouri.

Another year passed. The explorers turned south and west through Montana, Idaho, Washington, and Oregon. On and on they went, making maps of this wild country which, because of their work, would soon

become known and opened for settlers to come and make homes.

Not until 1806 did they turn their faces to the east again. Then up the Columbia River, across the Rocky Mountains, and southward down the Yellowstone River they moved to the Missouri and returned at last to St. Louis. They had been gone for more than two years. But in that time they had blazed a trail several hundred miles long through the unknown land between the Mississippi and the Pacific.

Dangers from Indians

Traders had also gone with Lewis and Clark on their exploring trip. Some of these had stopped along the way to trap and hunt animals in the mountains. This was a dangerous thing to do, as the story of John Colter's adventure with the Blackfeet Indians shows.

Colter and a friend named Potts were trapping beavers on the northern part of the Missouri River. Suddenly they were startled by the sound of tramping on the shore.

"What was that noise?" asked Colter.

"Like buffalo," said Potts.

"Might be Blackfeet," answered Colter.

It would now be as dangerous to turn back as to go forward. Nor could the hunters land here. Two or three strokes sent the canoe around a large rock into



FIG. 91. Lewis and Charbonneau in their exploration of the great and unknown Northwest¹

the narrow current of the river. Almost at once five or six hundred Blackfeet warriors sprang out on both sides of the stream.

An Indian scout had discovered the trail of the white men. He had sent the whole band of Indians ahead to stop them at this narrow pass. The chief stepped forward and, with signals that meant a command, made motions to the hunters to come ashore.

Colter did as the chief commanded. But before the canoe had touched bottom an Indian snatched Potts's rifle from his hands. Jumping ashore, Colter took the weapon and handed it back to Potts.

But Potts had lost all his courage of a moment before, and with one push sent the canoe out into the stream. Colter shouted to him to come back, but it was too late. A bowstring twanged, and Potts screamed out, "Colter, I am wounded!"

Again Colter called to him to land, but the wound turned Potts's fright into rage. Aiming his rifle, he shot the Indian dead. That was also the end of Potts, however, for a hundred arrows flew through the air, hitting both man and boat.

No man admires courage more than the Indian; and the Blackfeet saw that Colter had been ready to defend his friend against them all.

¹ From a painting by E. S. Paxson in the Montana State Capitol.

The prisoner was now asked to give up his weapons. He was stripped naked, but showed neither sign of fear nor made a move to escape. His life in the Indian country had taught him a few words of the Blackfeet language. He heard the Indians telling how he should be punished to make up for all that the Blackfeet had suffered at white men's hands. One warrior suggested that the hunter be set up as a target and shot at. Would he be so brave then?

But the chief shook his head. It would be poor sport to punish a prisoner who showed no more fear than this white man, listening and waiting for them to arrange his death. Suddenly the Blackfeet leader turned to Colter. "Could the white man run fast?" he asked. In a flash Colter guessed what was to happen. He, the hunter, was to be hunted. No, he signaled, he was a very poor runner. Actually he was one of the fastest runners in the country.

Commanding his warriors to stand still, the chief roughly led Colter out 300 yards. Then he set his captive free, and the shriek of the running warriors told what kind of game this was to be. It was to be a race for life.

The white man shot out with all the power of his muscles. Fear seemed to give wings to this man running for his life. Before him stretched a plain six miles wide, the distance he had paddled in such a leisurely

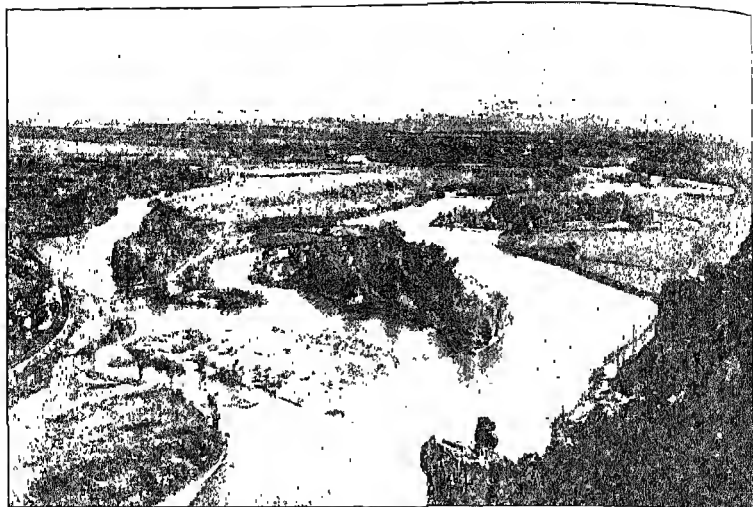
way only a few hours before. At the Jefferson River was a thick forest where he might escape. Somewhere along the Jefferson was his hidden cabin.

Across this plain sped Colter, followed by a band of 600 shouting Indians. Not one breath did he waste looking back over his shoulder till he was more than halfway across the plain. Then he saw that all but one of the Indians had been left far behind, and that one was only 100 yards away from him!

There was still a small chance of escape. Colter rushed in a burst of speed that brought blood gushing from nose and mouth over his face, while the sharp spines of the cactus plants tore his naked feet like knives. The river was in sight. One mile more and he would be in the wood! But the Indian behind was gaining at every step. Another backward look! The warrior was not 30 yards away! He was holding his spear ready to throw it into Colter's back. The white man turned. Tired and beaten, he threw up his arms, and stopped.

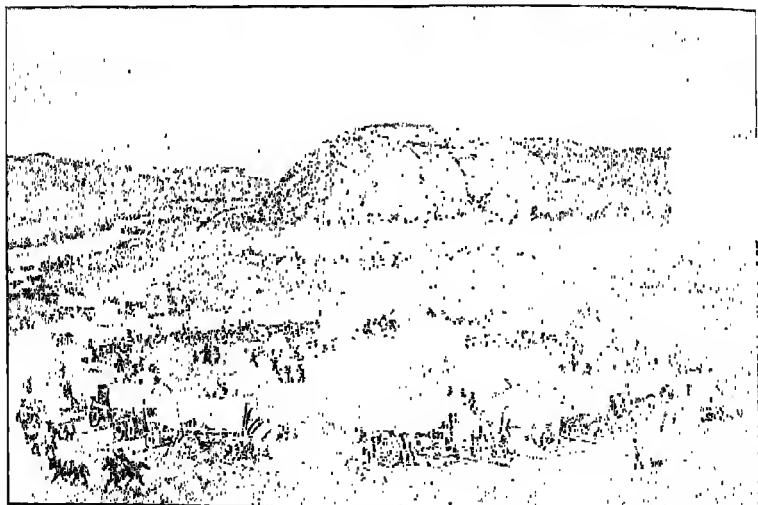
This is a trick that Indians use when a wild beast is following them. It stopped the Indian too, and surprised him so that instead of throwing his spear, he fell flat on his face, breaking the slender weapon in two. With a leap, Colter had snatched up the broken point and run it through the Indian's body.

That stopped the other warriors, who picked up the



Publiser's Photo

FIG. 92. Where three rivers join together to form the Missouri



William H. Jackson

FIG. 93. Camping at night on the trail to the West. The wagons were formed into a circle for better protection from Indians¹

body of their friend. Colter now had time to reach the river. In he plunged, fainting and dazed, swimming for an island where driftwood had gathered. Under this driftwood he dived, coming up with his head among branches of trees.

All that day the Blackfeet searched the island for Colter, running from log to log in the river; but the brushwood hid the white man. At night he swam downstream like any other hunted animal that wants to throw followers off the trail. Then he went ashore and started across the country on a seven days' journey for the Missouri company's fort on the Big-horn River.

Naked and unarmed, he reached the distant fur post, having lived entirely on roots and berries all the way.²

"Oregon" Was Calling to the Settlers to Cross the Mountains

No matter how dangerous was the traveling, the home-seekers were sure to follow the trail-blazers. There seemed always to be "better land out West"! In the 1830's missionaries went to live and work among the Indians. Year by year their letters told of the wonderful climate and the rich soil of the lowlands

¹ Reproduced, by permission of the author, from Joseph G. Masters's *Stories of the Far West*.

² Adapted from Agnes C. Laut's *Fur Trade of America*. The Macmillan Company, New York (1921), pp. 236-251.

around the Columbia River. They were speaking of the beautiful valley between the Coast Ranges and the Cascade Range (map 4, pages 14-15).

"Oregon," as this land was called, was held by some English fur traders who were members of the Hudson's Bay Company. For many years the men of this company had been gathering up the furs and bringing them back to the East to sell. One of our own American citizens, John Jacob Astor, had also tried to set up trading posts in that same region, but the English company had beaten him and now ruled Oregon.

It was an old Canadian, John McLoughlin, who had built up the trade with the Indians. They called him White Eagle because of his snow-white hair and his sharp face. McLoughlin had gone to Oregon by canoe and pack horse across the tall Rockies. He now managed the Hudson's Bay Company's post, but he knew that soon all the land around the Columbia River would be filled with settlers and farms. A traveler once asked him, "Do you think this wild country will ever be settled?"

"Sir, wherever wheat grows, men will go."

McLoughlin was right. The settlers in the Mississippi Valley were getting restless. Already they were being crowded out by newcomers from the East, so they were eager to pack up and find the land where wheat would grow.

Little did they dream, however, of the dangers of the trip ahead of them.

Let us go with some of these pioneers on the long journey across the plains and the mountains to Oregon.

To Oregon with a Wagon Train

We start from the frontier village of Kansas City, Missouri, in the spring of 1849. There are 40 wagons in our train and more than 100 cattle. Beside the wagons are horsemen anxious and watchful for signs of Indians, for inside are their wives and children.

Soon we meet other wagon trains and horsemen. A half-dozen men come dashing toward us on their horses. They are dressed in brown clothing which has been woven and made by their wives. We ride up to meet them. They are eager to find out where we are going.

"How are ye, how are ye, boys? Are ye for Oregon or for California?"

"For Oregon!" we sing out.

Soon the wagons arrive. We look at one of them. A tired-looking woman is seated up in front driving the oxen. The faces of several children peep out at us from under the dirty cloth top. A girl is knitting a garment. Through the thick mud beside the wagon walks the father driving the animals on. It has been raining, and we have never seen such mud!

Later we come upon other wagons which are stuck

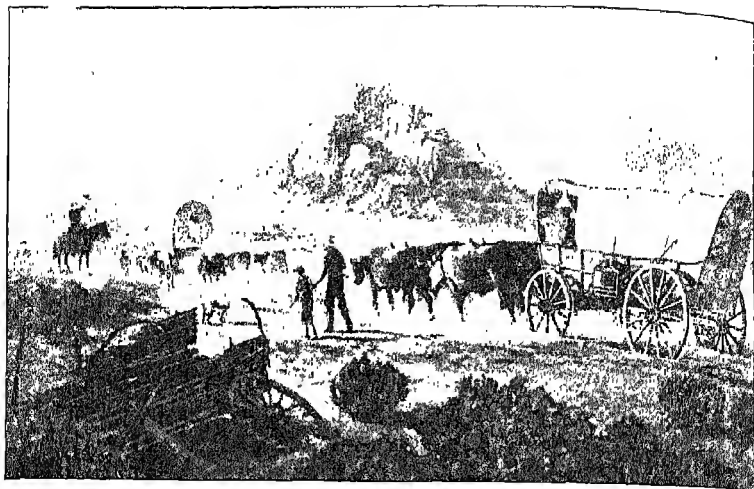


FIG. 94. The people in this caravan will soon see the Rocky Mountains in the distance. Notice the old wagon left by the trail¹

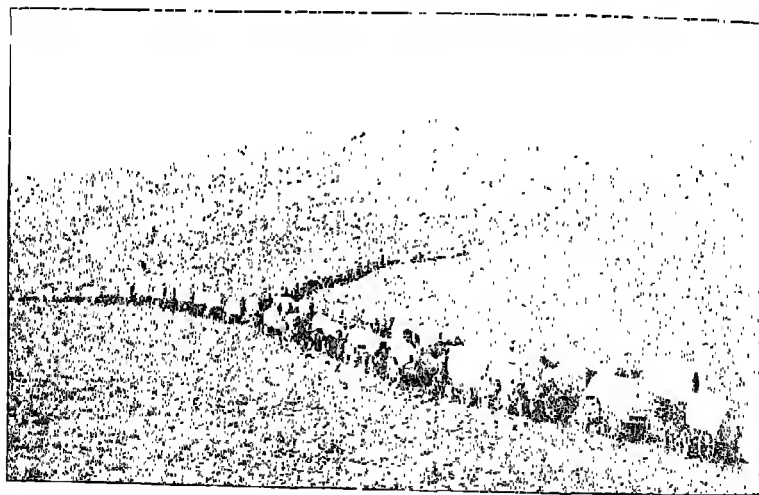


FIG. 95. The dividing point on the Oregon Trail. Some of the wagons are turning south toward California; others are going on to Oregon²

in a deep ditch. The road is so bad that we decide to camp until the trail becomes harder. Camp is made. The wagons are placed to make an open square, and the cattle are turned inside this square to graze.

Next morning the sun is out, and it is blazing hot. We start. For three months we shall see every kind of climate and soil, every form of land. For the first few weeks we cross prairie land that is fairly smooth. One day we make ten miles; another, fifteen; never more than twenty. On bad days we struggle on, making not more than three or four miles.

Then we pass into a dry region. With hot, dry mouths we search for water. Suddenly there is a shout ahead, "A spring of pure cold water." With joy we throw ourselves down and drink from the spring.

Day after day we plod on. Some of the cattle die. Several people are ill and have to be carried in the wagons. The oxen go more slowly, never over eight miles a day now.

Now we come to a grave which has been dug for a traveler who has just died on the trail before us. The wolves are trying to dig up the body.

We go on. The plains are becoming rougher; the hills are steeper; even the valleys are higher. Now we

¹Reproduced, by permission of the author, from Joseph G. Masters's *Stories of the Far West*.

²From "The Covered Wagon," by Paramount Pictures, Inc.

arrive at a steep cliff, with the rock dropping straight down 75 feet. There is no roadway. How shall we pass? But our men are clever as well as brave. They invent new ways of doing things. With heavy ropes they lower the wagons from the top of the cliff to the bottom. On we go, day after day, for two weeks more.

It is June, and the days become hotter and hotter. The soil is dry and full of salt and sulphur. The water is not fit to drink. How thirsty and tired the people become! A rider who has gone ahead comes back and tells us: "Today I saw sixteen skeletons of cattle that died last year from this water. They were all within three steps of one another."

When we set out our people were in good health, but now nearly all are in pain. When we get up in the morning, it seems as though we could not walk another step. The days are so hot that we must rise early in the morning — at four or five o'clock — and go as far as we can before "sunup."

We come to a river, where we chop down trees and make strong rafts of logs. On these we lay our things and let the rafts float to the other side. At a shallow place in the river we drive the ox teams across.

Then the hills get steeper, and the trail rises steadily. From time to time we come to steep cliffs. Whole days are spent hunting for narrow paths through which the teams can pass. At one point the wagons

have to be taken to pieces and carried across a river on a raft.

In late June, however, we climb to the top of a steep ridge. There, to the west, we gaze upon the magnificent Rocky Mountains. Four days more go by as we move up toward them. The roads become harder and harder to travel. The passes become so narrow that the rays of the sun never reach to the bottom. Now the canyons wind in and out, rivers flowing in them hundreds of feet below. One stream winds about so much that we have to cross it thirteen times!

By the middle of July we are high up in the Rockies. The weather is hot in the glaring sun of daylight, but turns to freezing cold at night. A scout comes back and tells us of the land ahead. "An awful-looking place . . . no grass . . . nothing growing but wild sagebrush and small patches of prickly pear."

We are over the Rockies now, and down on level land again. Nothing grows here but sagebrush. We are getting so very tired! The animals too are weary. We are forced to throw away some of our things, they are so heavy. At last we come to a great river. We are very glad, because we know that if we go along its banks we shall at last reach Oregon. But there are still many miles ahead!

We plod on. Some of the oxen have died, so we must leave one of the wagons behind. We must also

throw away some more of our household goods. The women cry about that.

On and on we go. Finally we come to a green valley which has trees and bushes. The children run gaily about picking wild cherries and plums, raspberries and gooseberries. We are in Oregon. The hardship of the last lap of the westward movement is over.

More and More Settlers Came to Oregon

It is hard to believe that so many people were willing to suffer such hardships to go across the plains and mountains. But they were, and ox trains kept on working their way through to Oregon every year.

Soon the rich soil in the river valleys and along the coast became the farms of the pioneers. Like their fathers in Ohio in 1800, they cleared the forest, built their log cabins, and planted their crops. Of course life was not easy on this last frontier, 2000 miles from relatives and friends. It was hard to find food; even wild animals were scarce. A few deer and fowl, fish from the rivers, and wild fruits and honey kept the pioneers together during the first year.

In the second year they planted crops of wheat and other grains. They raised pigs and cattle. Little by little the communities grew. Frame houses took the place of log cabins. Farms were located closer and closer together. Villages sprang up here and there.

By the 1850's the region known as Oregon was really being settled. It would not be long before Oregon would look like the states far back east, across the mountains. American civilization was now growing on the west coast as well as on the east coast.

The Story of Settlement Was the Same in Every Region

You can now understand the whole story of the westward movement. As soon as the pioneers settled one region, others came along and went farther west. Time after time the story repeated itself. And the order of going west was always the same. It was like this:

First, hunters and trappers blazed the trails.

Second, traders followed with pack horses, exchanging the goods of the Eastern towns for the furs and crops that the "new Westerners" had to sell.

Third, caravans of brave settlers in Conestogas and other wagons made the trail a beaten road.

Fourth, more and more people moved in. The rough settlement became a village and then a town.

The frontier had moved steadily to the west.

So it was that all the land from the Atlantic to the Pacific became settled.

Books You Would Like To Read

See the titles at the end of Chapter XX.

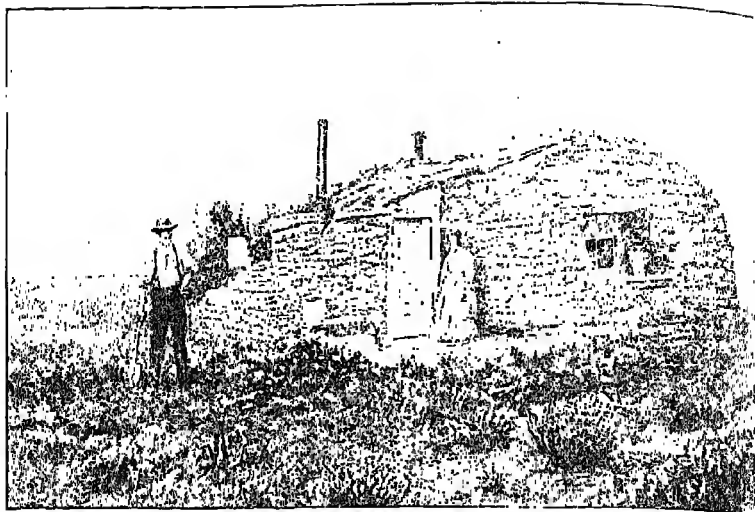


FIG. 96. Only a few of the early travelers to the West settled on the dry plains. This man and his wife did, however

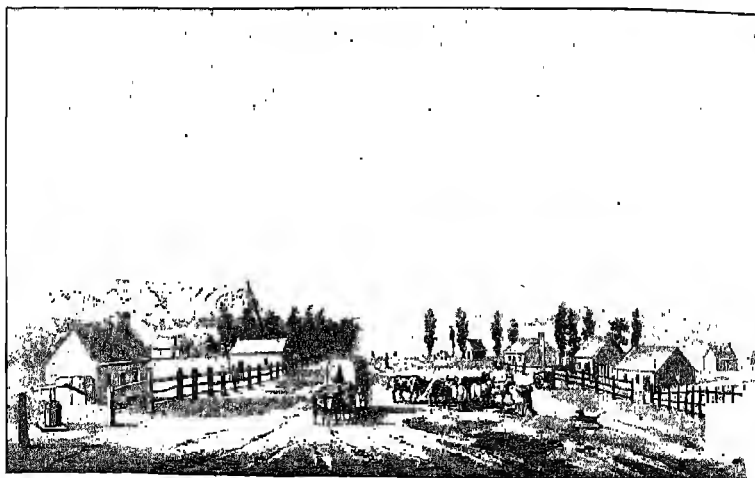


FIG. 97. A group of early settlers founded this village of Salt Lake City, in the Utah desert¹

CHAPTER XIX

The Region of the Cattle Plains

AFTER THE 1830's travelers by the thousands had passed across the dry plains, the mountains, and the desert country beyond. On the way they had asked each other, "What man could live in such a land as this?" And they had driven their wagons ahead as fast as they could. They were sure that no people could wish to make homes there.

Years passed . . . 1860 . . . 1865. . . . Settlement was slowly made safe from Indians and wild animals. Stages whirled through this same short-grass country, covering more quickly and comfortably the miles between Missouri and the Pacific coast. But the passengers still looked at the lonely landscape and were eager to be safe at the end of their trip. It still seemed to most people no place for homes to be built.

Thus the high plains just east of the Rocky Mountains, known as the Great Plains, had been skipped over by the settlers of the westward movement.

¹ From a lithograph in Stansbury's *Exploration and Survey of the Great Salt Lake of Utah*, 1852.

The Geography of the Plains

We can well understand that pioneers looking for green grass and forests of beautiful trees would hurry across the high plains. Here the earth was dry and there was little vegetation, for the most part nothing but brown grass and sagebrush. Those who stayed there for some time learned that little rain fell in this region. That was because of the winds and the mountains to the west of them.

In our country the winds generally blow from the west. We call them the westerlies. Across the Pacific Ocean they come, laden with the moisture which they have picked up on the way. As they reach the Sierra Nevada, the Cascade Mountains, and the Coast Ranges, they rise to cross the mountains. As they rise the moisture cools, and part of it turns into drops of water which fall as rain on the western slopes of these mountains.

After the winds have passed over these mountains, they blow on across the plateaus. When they rise to cross the Rocky Mountains, they again lose most of the moisture that they are carrying. You can see, therefore, that the rain falls on the western sides of the Rockies, leaving the part of the Great Plains just east of the mountains very dry.

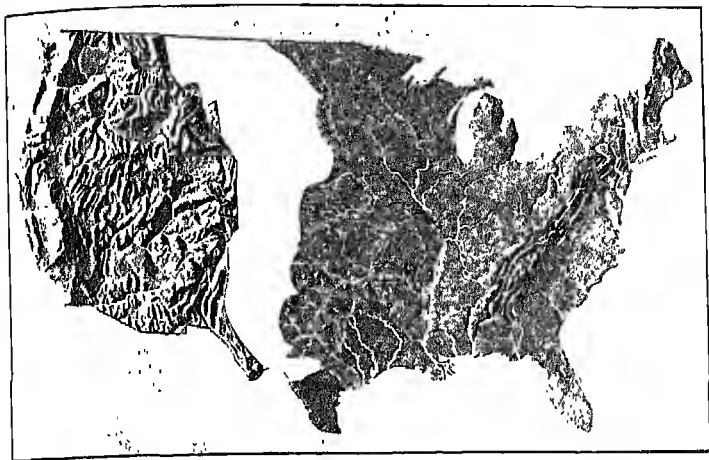


FIG. 98. The white area shows where the high cattle plains are located

Thus it was that during the 1840's and 1850's pioneers searching for rich farm land passed over the high plains with little thought of stopping there to settle. Do you see how geography helped to determine the settlement of this region as it had each section before it?

Yet there was abundant life in this dry territory neglected by the white men. Huge herds of buffaloes were still wandering about in the plains. Powerful and warlike Indian tribes lived there, too. Some of these tribes had made their home in the plains and the mountains for many generations. Others had moved

there later, having been pushed westward by the coming of the white men.

The Indian and the buffalo had arrived at their last stand on the Great Plains. The Indians were fighting bitterly to hold their land, land which the white men had not yet learned how to use.

In the 1870's and 1880's, however, the Americans did discover a use for it, and the freedom of the Indian was gone forever!

The Great Plains Become a Rich Cattle Country

During those years large herds of cattle roamed far to the south in Mexico and in Texas. So many of these animals were there that often no man seemed to own them. Even when someone did, it did not mean wealth to the owner because there were so many cattle that they were not worth much. They could not be sold, since they were so far from the settled parts of the country.

The North and the East were in need of meat. The Southwest had cattle to sell, but there was no easy way to trade. Once in a while cattle would be driven north beyond Texas, even to Missouri or to Illinois, but most of the herds remained in the South.

By 1870, however, iron rails connected the Far West with the East. Trains passed back and forth, speeding in a few days over distances which before

had taken weeks or months to cover. The railroads now saw a way to make a business of cattle shipping. If the cattle owners of the southern border would drive their cattle north to the railway, the railroad owners could ship them to the East.

As time went on, cattle owners saw that the Great Plains were a wonderful grassland. Why could they not move their cattle to the plains? Herds could be driven north and grazed there to grow fat and sleek before they were shipped to market.

So it came about that ranches where cattle could graze sprang up on the plains. Year after year long lines of cattle moved northward from Texas and the Oklahoma country toward the railroad. The path which these thousands of cattle had beaten out during many years came to be known as the "Long Trail."

The Long Cattle Trail

For more than 1000 miles along the eastern edge of the Rocky Mountains the Long Trail stretched like a great rope from South to North. It twisted and turned in 100 or more small pathways, making a well-marked line from Texas to Montana and the Canadian boundary.

Even today this cattle trail can be seen — only dimly in Mexico, but very plainly across Texas and Oklahoma. Even the plows of thousands of farmers

of Kansas and Nebraska have not destroyed it. In Wyoming and Montana the narrow trails still run like ribbons along the sides of the mountains.

**In the 1870's and 1880's Cowboys and Their Herds
Roamed the Plains**

During these years the cowboy watched these herds of moving cattle on their way north. On his Indian pinto pony he felt that he was master of all he surveyed. He and his horse were the best of companions, and he rode almost as if he were a part of the animal. Mark Twain gives us an idea of how well these cowboys rode:

I have never seen such wild free skill in riding outside of a circus as these. . . . Mexicans, Californians, and Mexicanized Americans showed their skill in Carson [Nevada] streets every day. How they rode! Leaning gently forward, with the brim of their broad slouch-hats blown square up in front, and long rope swinging above the head, they swept through the town like the wind! The next minute they were only a sailing puff of dust on the far desert. If they trotted, they sat up gracefully, and seemed part of the horse; did not go jiggering up and down after the silly Miss-Nancy fancy of the riding-schools.¹

The cowboy dressed in a fashion which has since become famous in the theater. A heavy woolen shirt open at the neck, with a bright-colored silk or cotton neckerchief tied in a knot in front. This protected the

¹ Adapted from Mark Twain's *Roughing It*, Vol. I, p. 168. Harper & Brothers, New York, 1871.



Rodney Thomson

FIG. 99. These cowboys are in town on a holiday. From the picture you can see how they dressed

back of his neck from sun and wind. In cooler weather he put on an extra woolen shirt and a leather jacket. The jacket always flapped in the breeze as he rode, for he refused ever to button it. In cold weather a short sheepskin coat was worn in place of the leather one.

Two articles of clothing were especially dear to the cowboy — his boots and his gloves. He never used his

hands for rough tasks, and he never walked unless it was necessary. His hands, white and well kept, were carefully covered by soft gloves with wide cuffs which protected his hands from rope burns and from the weather.

The boots were of soft leather with long, pointed toes and high heels. The soles were light and thin. These useless-looking boots showed to all the world that the cowboy was not one of the creatures who are forced to walk upon the earth. He sat on his pony like a king, and he was proud of being a horseman.

Perhaps the most interesting article of clothing which the cowboy wore was a pair of "chaps." The chaps were really two long, very wide leather or sheep-skin trousers connected by a narrow belt. They were cut away at the back so that they would not interfere with the man on horseback and would not overheat the body, as all leather clothing does. They also protected the legs of the rider through country that was thick with bushes and prickly pear and other kinds of cactus.

A coiled rope hung from the cowboy's saddle. This was usually a hand-woven Mexican lasso, wonderfully strong. In his mouth the horse had the Spanish bit, but this was used very little, since the cowboy knew more clever and less cruel ways of guiding him.

Spring was the round-up season, when the cowboy's

work was especially hard and exciting. It was at this time that the calves born on the range during the winter were branded with a hot iron with their owner's mark. The herds from all over the range were brought to one place. Then the cowboy's task was to separate the young calves from the herd, so that they could be branded. This was very difficult. The cattle moved about constantly, and their closely packed bodies left little space through which the cowboy could ride. As the cattle tossed their heads he looked down upon a moving sea of dangerous horns.

Into that moving mass of strong animals the cowboy plunged on his light pony. The cattle often pushed against him from all sides, but he had no time to worry about that. His eyes and those of his well-trained pony were looking everywhere for the little frightened calves, who were keeping close to their mothers.

As soon as the rider saw a small head he started toward it. The pony did not need to be guided, for he knew at once which cow and calf his rider wanted. Soon the pony was driving the cow toward the outside of the herd. A sudden swish of the cowboy's lasso through the air, and the calf, caught in the noose, was being dragged away from the herd. But soon the little animal was running back to his mother, his young hide burning and smarting from the owner's brand on his hip.



FIG. 100. The cowboys worked hard in the round-up season¹



FIG. 101. A cowboy stops to talk to a settler. Why did the coming of settlers mean the end of the last frontier?²

This work of "cutting out" was very tiring to the ponies as well as to the cowboy. Every cowboy needed eight or ten ponies a day, since a single animal could stand the strain for only an hour or two.

When work was over and supper had been eaten, the cowboys would sometimes sit around, play the harmonica, banjo, or guitar, and sing. Perhaps some of them would entertain the others with stories. But the times for play were short, for work began almost with the first sign of dawn.

Such was the life of the cowboys on the cattle ranches. We see that a new kind of work was growing up on the Great Plains. A new region of America was being settled.

Settlers Began to Move to the Western Plains

All during the 1860's and 1870's caravans of covered wagons and herds of cattle could be seen traveling westward to the tall grass of the northern prairie. At night, around the campfire, the pioneer families sang songs of the frontier of their day. There was one which began like this:

Cheer up, brothers, as we go
O'er the mountains, westward ho,
Where the herds of deer and buffalo
Furnish the fare.

¹ Courtesy of the First National Bank, Pueblo, Colorado.

² Courtesy of Swift & Company.

Another song which many husbands and wives sang together was this. The husband began :

"Away to Colorado a journey I'll go,
For to double my fortune as other men do,
While here I must labor each day in the field,
And the winter consumes all the summer doth yield."

The wife would then reply :

"Dear husband, I've noticed with a sorrowful heart
That you long have neglected your plow and your cart,
Your horses, sheep, cattle, at random do run,
And your new Sunday jacket goes every day on.
Oh, stay on your farm and you'll suffer no loss,
For the stone that keeps rolling will gather no moss."

But the husband would insist :

"O, wife, let us go ; oh, don't let us wait ;
I long to be there, and I long to be great,
While you some fair lady, and who knows but I
May be some rich governor long 'fore I die,
Whilst here I must labor each day in the field,
And the winter consumes all the summer doth yield."

A man who had taken part in a trip over the prairies of Minnesota and the Dakotas in 1869 wrote :

We have met today a long train of wagons filled with emigrants who have come from Wisconsin, Illinois, Indiana, and some from Ohio. Look at the wagons, each drawn by four oxen — driven either by the owner or by one of his barefoot

boys. Boxes, barrels, chairs, tables, pots, and pans make up the furniture. On a feather bed beneath the white-cloth covering sit the grandmother, white-haired, old, and wrinkled; the wife, with an infant in her arms; and three or four romping children. Another barefooted boy, as bright-eyed as the one in Whittier's poem, . . . marches behind with his rosy-cheeked sister. They are driving a cow and a calf. . . .

Not only along this road, but everywhere, we may look at just such scenes. A great army is moving into the state. Towns and villages are springing up as if by magic in every county. Every day more thousands of acres are being cultivated.

I would have a home out here. True, life would be hard at first. The cabin would be of logs. But with my salt and pork I would have fish, prairie chickens, moose, and deer. I should have blistered hands and the backache at times; but my sleep would be sweet. I should have no theater to visit nightly, no star actors to see, and should miss the tramp of the people of the city.

The first year might be lonely; possibly I should have the blues now and then; but later I should have neighbors. The railroad would come. The little log hut would be replaced by a mansion. Roses would bloom in the garden, and morning glories open their blue bells by the doorway. The fields would wave with golden grain. All the comforts and luxuries of civilization would be mine.¹

Thus in the 1870's and 1880's settlers began to fill in the open plains. They took some of the open range and fenced it in for their farms. Now the cattlemen, who had driven the Indians and the buffaloes from this region, were themselves fighting to hold the land

¹ Adapted from Charles C. Coffin's *Seat of Empire*, pp. 127-130. Fields, Osgood, and Company, Boston, 1870.

for their herds. Next, men with flocks of sheep came in. Their hungry sheep nibbled the grass down to the roots and destroyed the cattle's pasture.

By the end of the 1880's much of the free outdoor life of the cowboys was ended. The cattle could no longer wander over miles of open country, finding food and water. The romantic "wild West" was becoming settled by steady, hard-working farmers.

Books You Would Like To Read

See the titles at the end of Chapter XX.

CHAPTER XX

Metals and Mining in the Mountain Region

BEYOND THE cattle plains there was still a wide stretch of land which the pioneers had completely overlooked as they hurried on their way to the coast. That was the mountain and plateau region shown on map 4, pages 14-15.

Notice what a vast territory it is today. Nearly 1000 miles it extends, from the Rocky Mountains of central Colorado to the Coast Ranges of California. North and south and east and west it reaches, over eleven of our forty-eight states: Washington and Oregon, Wyoming, Idaho, and Montana, Nevada and Utah, Colorado, New Mexico, Arizona, and California.

The Great Plateaus between the Mountains

It is important to remember several things about this mountain plateau region:

First, the land is high. Salt Lake City — a garden spot in the midst of the plateau deserts — lies at a height of 4200 feet. But from Colorado and Wyoming to the Coast Ranges there is almost no land below 5000 feet. Most of the towns and cities are 5000 or

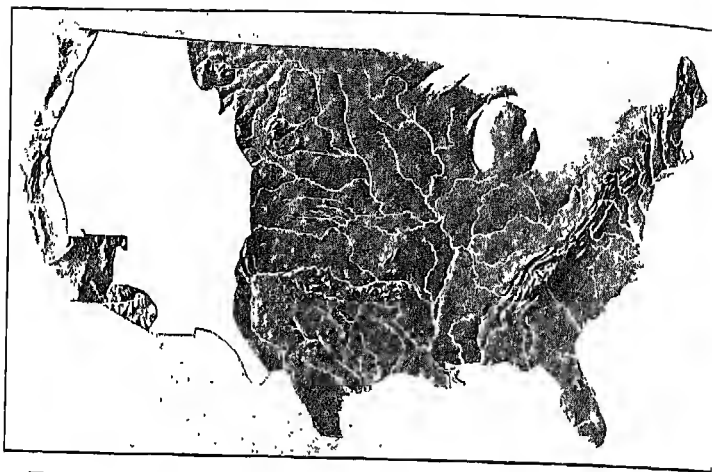


FIG. 102. The white area shows where the mountain-plateau region is

6000 feet high; some are even from 8000 to 10,000 feet above sea level. The busy city of Denver, for example, is 5000 feet above the sea.

Second, compared with other regions of our country, this mountain-plateau region is a very dry one. Here are the large deserts of America. They are found especially in the plateaus between the ranges of mountains.

In some parts of the mountains the amount of rainfall is 20 or 25 inches a year; but in the plateaus between, it is less than 10 inches — often less than 5 inches. In the completely dry deserts it almost never rains.

Why is this region so dry when the lands on the

Pacific coast are so green and fertile? The answer is the same as for the Great Plains. The winds blowing from the west drop most of their moisture on the westward side of mountains. The plateau lands are left very dry.

What temperature does one find with this small amount of rainfall? The sun shines most of the year, and the summer days become terribly hot, the temperature often rising to 120 degrees. The nights, on the contrary, are cold. The temperature drops rapidly as the dry air cools. So over most of the plateau land, which is from 5000 to 7000 feet high, we have dry hot days but cool evenings and nights.

Do People Live in Such an Unfavorable Climate?

With its high mountains, dry soil, little rainfall, hot days and cold nights, the region is not, as a whole, a pleasant place to live. But there are many inviting spots where thousands of people make their homes. There are large cities and middle-sized towns. Denver has about 287,900 people; Salt Lake City, 140,300; Helena, Montana, 11,900; and there are a dozen others with from 5000 to 15,000 each.

How has it happened that so many people have gone there to live? To answer that question we must go back 90 years or so to the time when the settlers were traveling along the Oregon Trail.

Gold Discovered in California

Let us imagine that we are going with a wagon train which is setting out for the trail. For weeks we have struggled across Nebraska, over the Rockies in Wyoming, and along the plateau land of the Snake River basin in Idaho.

In eastern Idaho we come to a traders' post named Fort Hall, where we plan to rest our animals and repair our wagons. At Fort Hall the Oregon Trail turns north and west and winds through the hilly plateau of Idaho and Oregon. But just beyond the fort another trail turns to the south and west. It leads across the desert basin of Nevada, over the Sierra Nevada into California. This is known as the California Trail. In 1848 it is being tramped down by pack horses and now and then by a "prairie schooner"; but most of the travelers go on north to Oregon.

As we arrive at Fort Hall there is great excitement. Some wagons that were headed for Oregon are turning south along the California Trail.

"Why do they give up that rich Oregon land?" we ask.

"Gold!" is the excited reply. "They have discovered gold at Captain Sutter's Fort in the valley of the Sacramento River in California!"

Can this be true? Should we too turn south?



FIG. 103. While a sawmill was being built for John Sutter, who owned a large ranch in California, gold was discovered

The very next morning a trapper arrives over the trail from California. Yes, indeed, there is gold there. Already hundreds of people have left San Francisco and the farms near by and have gone to dig gold along the American River. Ships are bringing more people into San Francisco harbor; for already the news has gone round that money can be made easily.

We listen to the stories of getting rich quick and then we too turn our oxen south instead of north and hurry onward to where men are digging gold in California.

From *Communities of Men* you know the story of how the whole mountain region became filled after the first gold was found in 1848. People in thousands of communities all over the world listened to the stories of fortunes to be washed out of the earth. They gave up their work, left their homes, and made their way to the gold region. As the 1850's passed, miners, farmers, settlers, by tens of thousands, crowded into California. By 1850 it had become a state.

In the meantime miners had searched in Nevada and Utah and other parts of the mountain country for gold. They had found some in small amounts.

Then in 1857 came the exciting news: "There's a mountain of silver in Nevada! Silver in the Washoe Mountains! Old Sun Mountain, the guidepost, is full of riches!"

Almost at once people left the California gold fields and went to find silver in Nevada. New crowds from the Mississippi Valley towns and the Atlantic plain loaded up their wagon trains and crossed the prairies. Up the Nevada trails came hundreds of miners staking out land for themselves. Shacks sprang up on the mountain sides. Soon a village appeared and then a town. By 1868 there were 10,000 people in Virginia City, the "boom town" that had grown up on Sun Mountain.

By that time people believed that there must be gold and silver and other precious metals in all the mountains near by. So, year by year, the fortune hunters searched the mountain sides of the Rockies, the Sierra Nevada, the Cascades, and the other ranges. Even if they could not raise wheat and corn on these dry, stony lands, they could perhaps dig valuable things from the earth.

The story of the way Montana and Idaho grew is much like that of the other mining states. In the early 1860's some Canadian travelers lost their way while crossing a valley in Montana and suddenly found gold. Almost at once they made a little settlement at a place called Bannack. In a very short time a row of log cabins appeared down the crooked main street, and Bannack became a mining town of some 2000 persons.

The discovery of metals in the West drew settlers

into even the highest of the mountain regions. Men packed their few belongings, said farewell to their wives and families, and hurried off to be among the first to search for riches. Some "struck it rich," settled down, sent for their families, and prepared to live in a grand way.

There were always the restless ones who pushed on to the newest mining camp that was being opened. "Better luck at the next camp," they would shout as they left. Some of these were not lucky, however. Then they drifted into other kinds of work and earned their living in that way.

Even during the rush for gold a few settlers in the present states of Montana, Wyoming, Idaho, and Oregon turned to agriculture after they had failed to find a good claim. These people knew that the miners must eat, so they set about cultivating the soil. They sold what they raised on their farms to the mining camps at a large profit. Others brought herds of cattle from the ranches of Texas. So large did the numbers of cattle become that these owners became known as "cattle barons" or "cattle lords."

New gold hunters continued to come from all directions, however. In 1863 the territory which extended from the eastern boundary of Oregon to the Dakotas was divided and named Idaho. In this region metals were being found everywhere — gold, silver, and copper

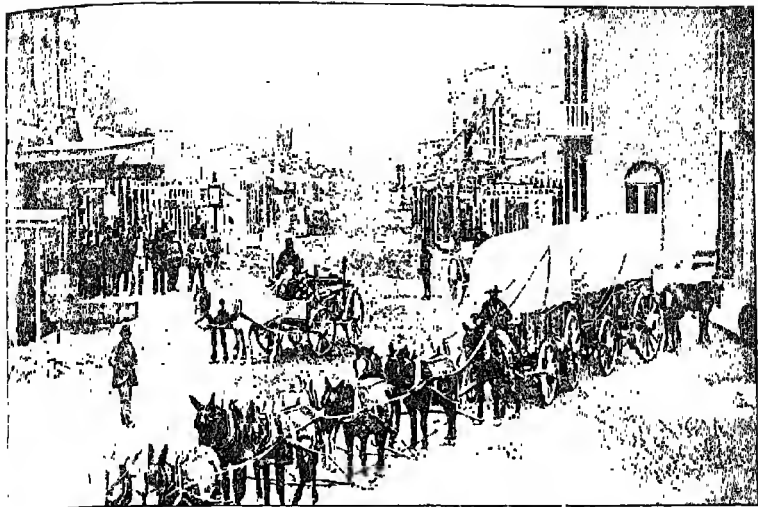


FIG. 104. The main street of Helena, Montana, in 1872 during the gold-rush days. Within ten years the town was built

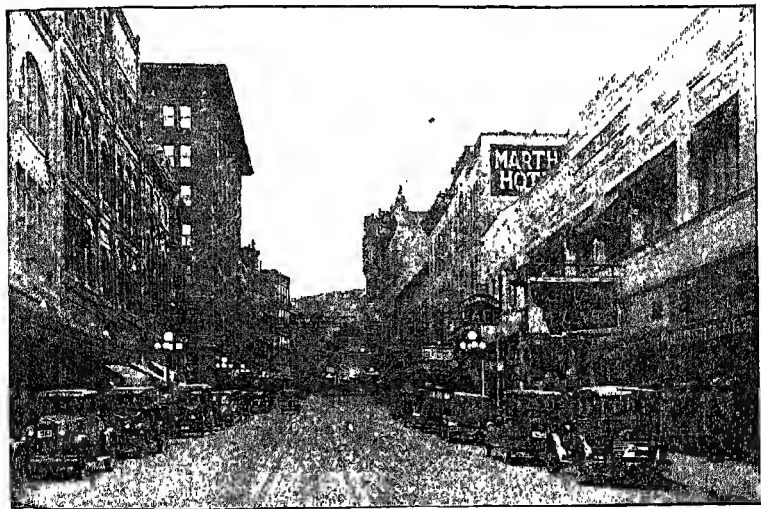


FIG. 105. Main Street in Helena, Montana, as it is today

in Butte and around Boise. So rapidly were the mountain towns growing that in 1864 the eastern part of Idaho became the new territory of Montana.

In 1864, also, gold was discovered in Last Chance Gulch, which is now the main street of Helena, Montana. With surprising speed Helena grew, in a setting of wonderful mountain scenery. It was said that \$144,400,000 worth of gold had been taken from the mountains in Montana by 1876. The region around it was called "one field of bewildering wealth."

As you know, gold was not the only precious metal in the mountains. During the 1880's silver, copper, lead, zinc, and other metals were found. In 1879 lead and silver mines were opened in Leadville, Colorado. In Nevada great quantities of silver, copper, lead, and zinc were found. Silver was discovered at Philipsburg and Butte, Montana, in the late 1870's. During the early 1880's copper was found at Butte, and Butte once more became a noisy mining town. After 1880 copper was also found at Bisbee, Arizona, where silver had been discovered several years before. In 1884 one of the wildest rushes in the history of mining took place when silver and lead were dug in undreamed-of amounts in the Coeur d'Alene region of Idaho.

Two other "natural resources" also helped towns to grow. In 1882 coal was discovered near Cedar City, Utah, and mines were opened to supply fuel for

the iron mines near by. In Wyoming petroleum (oil) had been known since 1832, when it was found near Lander. At that time it was used by the early trappers as a liniment to rub on bruises. The overland travelers also used it to grease the axles of their wagons. Not until 1883 and 1884, however, when three wells were dug, did it become important.

In Utah, pioneers had settled as early as the 1840's. By 1850 they had discovered iron and had laid plans for a foundry, or shop where it could be melted. They sent to Europe for blowers and molders and furnace-men to work in the foundry. Two years later pig iron was made in Utah. Brigham Young, the leader of the Salt Lake group, did not encourage his people to hunt for gold and other metals. He wished to have his community depend on agriculture rather than on mining.

Life in the New Mining Communities

From Montana to Colorado, Nevada, and Arizona mining was developing side by side with cattle raising and farming. It was a new kind of American life.

During the 1860's and 1870's the mining towns were rough settlements. Men crowded into any kind of shelter — tents, caves, box cars, or brush shelters built like the Indian shacks. The miners were followed by other men who were ready to "get rich quick" on what the miners would spend. They were gamblers and

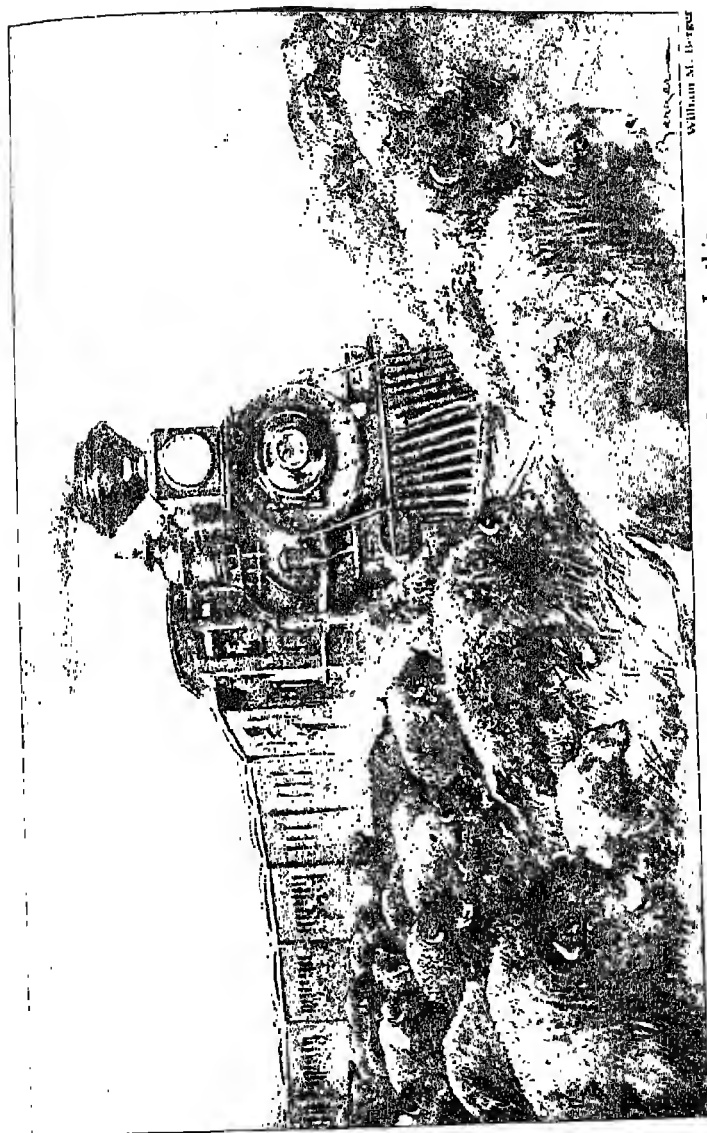
saloonkeepers. Almost every third cabin in the town was a saloon where a glass of liquor was sold for 50 cents' worth of gold dust. Gambling tables were set in the barrooms. Every night there were quarrels, shots, wounds, and sometimes even murders.

At night a man walking down a street never knew when a street fight might suddenly break out. Peaceful citizens took care to be in their cabins or to run to safety when a shot was heard. Women dared not be seen on the streets of a mining town after nightfall, and even in daylight they did not go out of their homes alone.

Sunday was the most exciting day in the mining camp. Horse racing amused some of the miners. Others gathered to watch powerful men fight each other in a boxing ring. The streets rang with shouts. Often fights over the ability of the boxers broke out among those watching the fight. These usually ended as suddenly as they had begun. Two men who had been on the point of a battle a few moments before would be seen strolling arm and arm down the street as though they were the best of friends.

The Railroads and Trade Help Settlement

The cattlemen, the home-makers, and the miners had scarcely settled the grass and mountain lands when they began to trade with the merchants of the Atlantic



William M. Dwyer

FIG. 106. Early railroad travel was full of adventures. In this picture a herd of buffalo has stopped the train

seacoast and the Mississippi Valley. The frontiersmen needed Eastern goods, and the Eastern city dwellers needed Western food and raw materials. These demands for trade brought better and cheaper means of transportation into the Western states.

The railroad builders were farseeing businessmen. There was James J. Hill, for example, the builder of the Great Northern Railroad. Hill saw that the land of the Northwest could be claimed for farms and towns if regular and speedy transportation were built there. So he and his business friends built railroads through open country where there were as yet no settlements and farms and even no roads.

At the same time the businessmen advertised in the cities of the East and Middle West. They told the people about the free land in Minnesota, the Dakotas, Montana, Idaho, and Washington. They talked of the danger to health from living in factory towns. They even went to the expense of running free trips through the Northwestern country. Hill wanted people to know about the beauty and the riches of the region so that they would make their homes there.

The Mountain Region Begins To Be Settled

In many parts of the Northwest, settlers began to follow the railroads. Fields of wheat waved on the Minnesota and Dakota plains, and grain elevators

rose along the tracks of Hill's Great Northern Railroad as it ran through the new small towns.

Then eastern Montana began to change. Farming went farther westward and the raising of sheep and cattle increased. Wheat farms sprang up as soon as the railway was there to ship the grain. By 1890 the mining state of Montana had more than 5000 farms, and farming was becoming as important as mining.

In southern Idaho the first farms and cattle ranches had begun in the valleys beside the mines. With the coming of the railways food raising became ever more important. Sheep and cattle were imported in the 1870's, and in later years sugar beets and other crops proved successful. Idaho potatoes became known everywhere for their huge size.

When the railroads came through in the 1860's and 1870's, the days of the open cattle ranges and the rough mining camps were over. "Nesters," as the settlers were called, flocked into the river valleys. Irrigation changed the cattle range into a peaceful farming region during the late 1870's and the early 1880's.

Of course these quiet farmers were not at all welcome to the "cattle barons," who tried their best to prevent the fencing of the range and the end of frontier life. But frontier life was to go, and it was the railroads more than anything else that hastened the end of those days of adventure.

The Plains and Mountains Gave New States to the Union

Numbers will help to make clear the rapid building up of the West. In 1860 Montana was almost a wilderness without people; in 1880 it had 39,159 people; in 1930 its population was more than 537,000.

In 1860 Nebraska had 28,841 people; in 1930 it had 1,377,963. In 1860 Nevada had 6857 people; in 1930 it had 91,058.

So it was with the other Western states. In 1860 there were only scattered hamlets and ranches. Thirty years later almost all of them had 60,000 or more inhabitants and had become states of the Union.

We can see, therefore, that although the desert and the mountain states had at first been thought uninviting for settlement, people did move there in great numbers. After the first fever of staking out claims had burned itself out, men began to use the land for farming. As the numbers of cattle increased, dairying became more profitable. It was found that by irrigating the land sugar beets would grow on the plateaus. Even wheat and other grains were raised so successfully that before many years had passed sections of Colorado, Nebraska, and other prairie and mountain states became garden spots. Farmers became rich. Villages grew into pleasant towns, and by 1890 another permanent kind of civilization was added to America.

**The Buffalo Disappeared and the Power of the Indian was
Gone Forever**

If you had seen the prairies black with buffaloes in the days before 1850, you would have thought there would always be great herds. Yet the hunters and settlers on the plains killed them in such large numbers that the herds grew smaller and smaller. Within a few years they had almost entirely disappeared.

The Indians, so brave in defending their last home, also gave way before the white men. We cannot tell you here how agreements were made with them which were not kept, how they were driven from their lands, or how the tribes that were left were made to live in small regions called reservations. That is a long story which you will read later. We shall say only that in the end the white man had conquered. The white man had also reached his last frontier.

By 1890 a period in our history had closed — a period of so much action, so much adventure, that sometimes we look back and regret that it has gone. Other periods have, and will have, their own thrilling story, but the romance of the pioneer in the United States is dead.

Books You Would Like To Read

- ALLEN, N. B. United States. Ginn and Company, Boston. A geographical and industrial reader.
- BAKER, OLAF. Buffalo Barty. Dodd, Mead & Company, New York. An exciting story which tells of Indians, wagon trains, and the early days in the West.
- BASS, FLORENCE. Stories of Early Times in the Great West. The Bobbs-Merrill Company, Indianapolis. Simply written stories of such men as Lewis and Clark, Buffalo Bill, and Kit Carson.
- BEARD, CHARLES A., and BAGLEY, WILLIAM C. A First Book in American History. The Macmillan Company, New York. See Chapter XIV for a description of early travel to Oregon.
- CARR, M. J. Children of the Covered Wagon. Thomas Y. Crowell Company, New York. Across the plains to Oregon in 1844.
- CHAMBERLAIN, J. F. How We Are Clothed. The Macmillan Company, New York, 1923. See pages 41-47, "On a Sheep Ranch."
- CHAMBERLAIN, J. F., and CHAMBERLAIN, A. H. North America. The Macmillan Company, New York. A good geographical reader.
- DARBY, A. C. Skip-Come-a-Lou. Frederick A. Stokes Company, New York. Pioneers on the Missouri River in the old days.
- FOGLER, DORIS, and NICOL, MRS. NINA. Rusty Pete of the Lazy A B. The Macmillan Company, New York. An interesting story of life on a Western ranch.
- GRINNELL, G. B. Jack the Young Ranchman. Frederick A. Stokes Company, New York. A boy's interesting adventures on a ranch.
- PERRY, F. M., and BEEBE, KATHERINE. Four American Pioneers. American Book Co., New York. See the story of George Rogers Clark.
- ROLT-WHEELER, FRANCIS W. The Book of Cowboys. Lothrop, Lee & Shepard Company, Boston.

PART VI

What Was Happening in the East as the Frontier Moved Westward?

OUR story of the westward movement is ended. We have seen how the explorers and the traders went ahead, blazing the trails in the wilderness. After them came the first settlers, building their cabins in the forest clearings. As the trails were widened into roads, larger caravans of home-makers made their way over plains and mountains.

The frontier moved slowly but surely to the west, from the Atlantic Ocean to the Pacific. And as it moved, the "regions" of our country became marked out. First were New England and the Old South on the Atlantic Coastal Plain. Next came the Central Plains of the Ohio and Mississippi valleys. Then the Old South extended westward from Alabama to Texas, and the New South was formed there. The cattle plains east of the Rockies came next, and the Pacific-coast region from Oregon to California. Last of all came the mountain-plateau region.

These are the regions of America which were marked out in the first rush of settlement. Each of these was at one time in our history a lonely frontier. With one

important change, which we shall soon learn about, they are the important regions of today.

But today these regions are very different from what they were when the first pioneers built their cabins. Today they are covered by thousands of fine farms and busy villages, towns, and cities in which live nearly 130,000,000 people. Today automobiles and busses, trains and steamboats, go back and forth, binding these people together into one country -- the United States of America.

Our next story tells how each of these regions changed from the frontier wilderness or the plains to a place of busy farms and cities.

CHAPTER XXI

Machines Help To Build the Country

Two Ways of Making Things Today

DID YOU ever see a carpenter, like the one in figure 107, cut a huge timber with a little handsaw? Back and forth, back and forth, goes his arm, moving the saw through the thick piece of wood. Slowly the sharp teeth of the saw cut through the block. Harder and harder the carpenter pushes and pulls, using all the strength of his muscles. At last he cuts straight through the stick, and one end falls to the floor.

But did you ever see a carpenter saw a heavy timber with a buzz saw like the one in figure 108? The truck drops the big timber onto an iron bench. The workman pushes it against the saw. Almost at once the blade whirls round, so swiftly that you cannot see its teeth. All the carpenter has to do is to keep pushing the timber against the saw. *Sz-sz-sz*, sounds the saw. In a few seconds it has cut through the timber.

Notice the differences in the two ways of work. In the first case the carpenter has to do all the work with a tool and his own muscles; in the second case he has only to guide the timber to make sure that the whirl-



Ewing Galloway

FIG. 107. A carpenter with his handsaw

ing saw cuts it in the right place. The machine has saved the man's muscles and has done the work more quickly.

Look around you and compare other ways in which work is done today. Watch the workmen digging up the streets. Perhaps some will be using shovels like the man in figure 109. Some swing their pickaxes to break up the hard concrete; often it takes more than one heavy stroke to loosen a piece so it can be lifted with a shovel. The men work very slowly.



Ewing G. Newby

FIG. 108. The buzz saw cuts quickly through several boards at once

No doubt you can also find a steam shovel at work like the one in the picture of figure 110. The workman does not have to swing an ax or a shovel; there is no lifting or striking or pushing or throwing for him. He simply sits on his huge machine and moves a little bar of iron back and forth, as your father does on his automobile. The great machine shovel does the work.

The steam or electricity gives many times more power than the man's muscles. It drives the huge

shovel deep down into the concrete pavement, breaking up great chunks of it. Then it picks up a large pile of these chunks, lifts it up, and swings it around into a big truck.

So it is with many things we do today. Giant machines do our work for us. Machines — railroad locomotives or automobiles — carry us and our goods in great cars across the country. Machines — typewriters — write our letters for us. Machines — telegraphs and telephones and radios — carry our messages. Machines — elevators — take us up and down in tall buildings. Machines give us light and heat. Our very lives depend upon machines.

People on the Frontier Did Everything by Hand

Very different were the ways of making things in the simple settlements of 100 years ago. A farmer who lived in one of them tells how things were done.

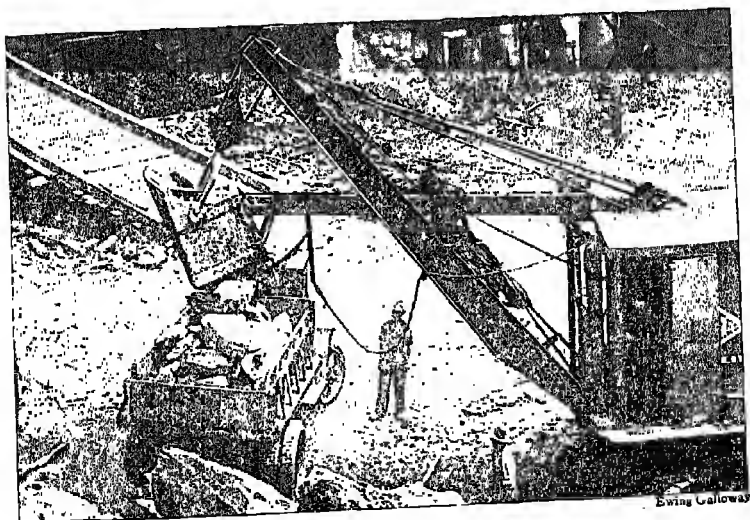
"In the village in which I grew up every family made for itself everything it could. Money was hard to get. Even if I worked hard all day, I could not earn more than 50 cents. Most workers were not paid with money. They were paid with meat, vegetables, and other things.

"There was a butcher who went from one farmhouse to another to kill the cattle and prepare the



L. Wing Galloway

FIG. 109. The muscles of men must do the work with the hand shovel



L. Wing Galloway

FIG. 110. Giant steam shovels do the work of many men

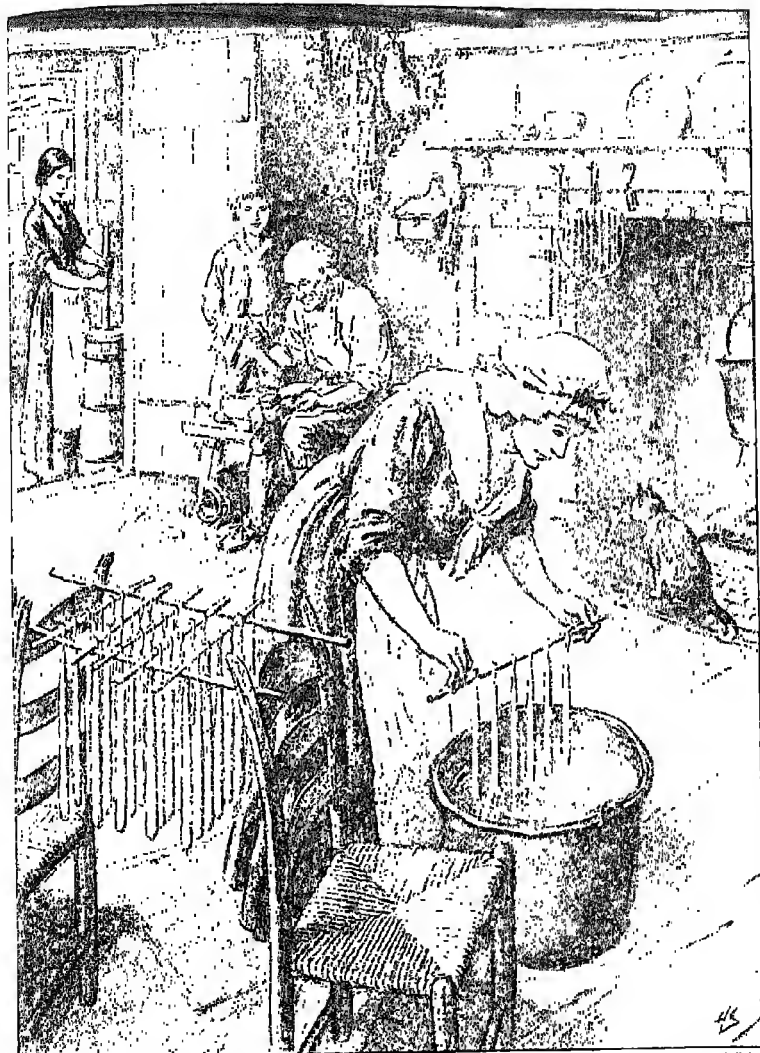
meat. There was a tanner who made into leather for shoes and clothes the skins of the animals that other people had killed. There was a clothier in the village. We would call him a tailor today. He made the clothing from yarn and cloth which the villagers had spun on their own spinning wheels and woven on their hand looms.

"Nearly everything was prepared in the houses of the people. We raised and killed our own pigs and cows; we salted down some of our meat; we hung the hams up in the chimney to smoke for a few days. We made our own dried beef.

"Rye and Indian corn grew in everyone's fields. We ground them into flour, and our women folks made the flour into bread. In a small patch behind the house we raised our own vegetables. We got sugar from our maple trees, which were tapped in the spring. We collected the sap and boiled it over a fire in the woods. This was a time for fun as well as for getting our supply of sugar.

"Every family made its own bread, pies, and cakes; and its own cheese, butter, soap, and candles as well. We sheared the sheep, spun the wool into yarn, and wove the yarn into cloth. We made linen out of the flax which we raised.

"Most of the time I wore a pair of yellow leather breeches, a checked shirt, a red-flannel jacket, and a



Harold Siebel

FIG. 111. As you can see, many things were made by hand in the early days of our country

rusty felt hat bent up at the corners. My shoes were made of animal skin; my apron, of leather. The apron was rubbed with grease to keep it soft and smooth.

"The children in the family learned to work like the grown-ups. Girls worked as well as boys. They made the beds, mended the clothes, spun the flax. They did errands, milked the cows, made the butter, and walked sometimes a half-mile to the stream for a pail of water.

"We were, as you see, a 'self-sufficient community.' We had nearly everything we needed, and we did not need much. But we had almost no money, and no stores from which to buy things."

Another farmer wrote in his diary in 1787:

"This time my farm gave me and my whole family a good living. . . . We had a little money with which we could buy nails and salt in the town, but everything we needed to eat or drink or wear we produced on the farm itself."

So it was the *farm* that provided the grain and the cattle for food, the wood for furniture and implements, the flax and wool for cloth, the skins for clothing and shoes.

We see, then, that the Americans who first came to this land of North America really did everything "by hand." They used their own muscles or the muscles of

Machines Help To Build the Country 371

animals. What brave people they were to build a great continent with axes and hammers and saws! With only a few hand tools, but with plenty of courage and daring, they were great builders, indeed!

The Invention of Machines Helped To Conquer the Continent

While the daring pioneers were blazing trails and building homes in the wilderness, other Americans were thinking up new inventions. They were learning how to make engines and machines do their work.

Some of the inventors made machines for the farms — machines to cut grain quickly, to plow and prepare the soil for planting, to thresh the ripe kernels from the stalks.

Other inventors made machines to spin yarn and weave cloth and to sew garments and shoes. Others invented ways of building things of wood and iron and concrete. Still others invented engines to make all these machines go.

Let us read a few stories of how some of these machines were invented. Of course in this book we can study only a few of the many thousands of inventions that took place. Let us take first the story of how a machine was invented to do the work of the farmers.

1. A Picture Story of Our "Bread Tools"

Is it a surprise to hear that for more than 250 years almost all the farming in our vast country was done by hand? Millions of acres of trees cut down — by hand axes. Millions of acres of soil planted with seed — by hand. Millions of acres of ripe wheat and corn, oats, rye, and barley — all cut down by hand. The conquering of the soil of the frontiers was done by plows and hoes, rakes and sickles and scythes that were not much better than those used by the farmers of Egypt many thousand years ago.

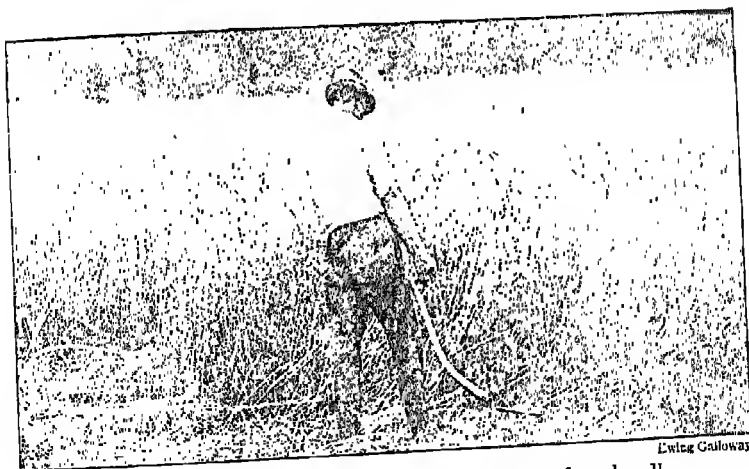
Even 150 years ago inventors watched farmers raising the grain for their bread and tried to find ways of improving their "bread tools." Some made better plows and hoes and rakes of iron; others improved the cutting tools — sickles and scythes; still others were making other machines and engines.

On the next three pages are five pictures which tell the story of how the tools with which farmers harvested (cut) their grain were changed by the new inventions. For many centuries sickles like that being used by the peasant in figure 112 were the only tools used. The fastest worker could not cut more than an acre a day. Then the scythe and the cradle made the work easier and faster.



Lewis Galloway

FIG. 112. It will take several days for this woman to cut an acre of wheat with her hand sickle



Lewis Galloway

FIG. 113. By making a long blade and attaching a long handle, the scythe was invented. Farmers could now stand and with one swing cut a wider path of grain than with the sickle



U. S. Department of Agriculture

FIG. 114. The cradle has not only a longer handle and a longer and thinner blade, but a frame which gathers the grain and piles it evenly on the ground. Much more grain can be cut. The cradle is a hand tool, however, not a machine

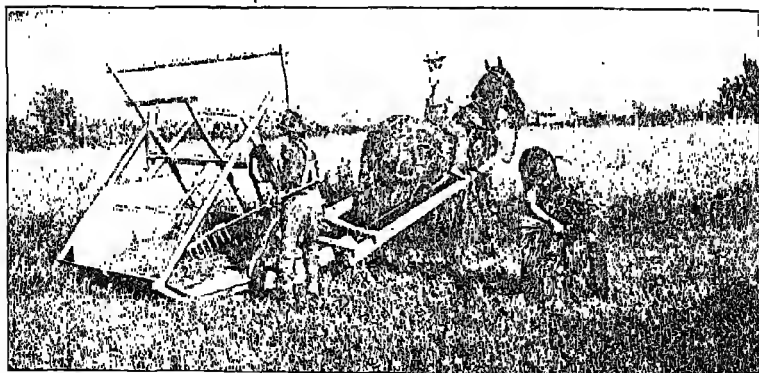


FIG. 115. This first reaping machine was invented in 1831 by Cyrus McCormick. It could cut nearly as much grain in one day as nine men could with their cradles



FIG. 116. One of the latest "tractor combines," a farming machine invented years after McCormick's first machine. Run by an engine, it cuts a path of grain 24 feet wide, picks it up, threshes out the kernels, and delivers them into a truck moving beside the machine

Cyrus McCormick Tries the First Farming Machine, 1831

In 1831 a young American farmer named Cyrus McCormick succeeded in inventing a harvesting machine that would cut much more grain than a sickle or a scythe or a cradle.

One autumn day McCormick drove his funny machine into a field of wheat to try it out. The news had spread around that young Cy was going to show off his "reaper." Everybody in the neighborhood turned out to see it. Most of them laughed at the idea of a machine that would do the work of human hands.

The first field of wheat which McCormick tried to cut was so hilly and bumpy that the machine did not work well. Louder and louder laughed the neighbors. It began to look as if McCormick had failed, when the owner of a level field came up to him and offered to let him cut his wheat. McCormick turned his horses into the level field, and the reaper cut the grain perfectly, even though it made a good deal of noise. Round and round went the reaper. In a few hours it had done work that would have taken several days with several men doing it.

McCormick's Machine

Although the reaper was proved to be a success, farmers did not begin to use it at once. One reason was

that the machine was so expensive that most of them could not afford to buy it. Another reason was that they were used to doing things in the old ways and they did not want to change to new ways. Most people could not believe that a machine could really do the work of skillful human hands. They just laughed at McCormick when he tried to sell them one of his clumsy-looking machines, and went on swinging their scythes and cradles in the old way.

But, as the years passed, reapers were bought by a few farmers who were ready to try new things. During this time the machines were improved. After 1900 the gasoline engine was invented. These "tractors," as they were called, were fastened to the harvester machine to pull it over the fields. As a result of this hundred years of invention, farmers today can have giant machines like that shown in figure 116.

Clever machines were invented to do nearly every kind of farm work. There were machines to plow and harrow, or break up, the soil; machines to put the seed into the ground; machines to weed and tend the young plants; machines to cut and thresh the grain.

There were machines to milk the cows; machines to separate the cream from the milk; machines to churn the cream into butter; machines to pump water. Today there are machines to do most of the farm work.

2. Machines To Spin Yarn and Weave Cloth

To make a suit, a shirt, or a dress three steps must be taken: first, threads have to be spun, or twisted, out of cotton or wool; next, these threads must be woven into cloth; third, the cloth must be cut into pieces of the right size and shape and made into garments.

For thousands of years threads were spun with a sort of long-stemmed top which women whirled with their fingers. The wool or cotton, or whatever was to be spun, was fastened to the long stem, called a spindle; the whirling of the top twisted it, and then the thread was wound on the spindle.

But long before America was discovered somebody invented a machine for this. It was called a spinning wheel. A big wheel turning steadily kept the spindle whirling very fast, and a woman could spin as fast as she could guide the thread first to twist and then to wind. Every frontier home in America had its spinning wheel. But think of doing this work for all the threads in a piece of cloth!

Then about 170 years ago an English spinner named James Hargreaves got a surprising idea. The story is told that one day he saw his wife's spinning wheel, which had been knocked over, turning round and round on its side. He thought, "Why couldn't I put several spindles in a row and turn them all at once?"

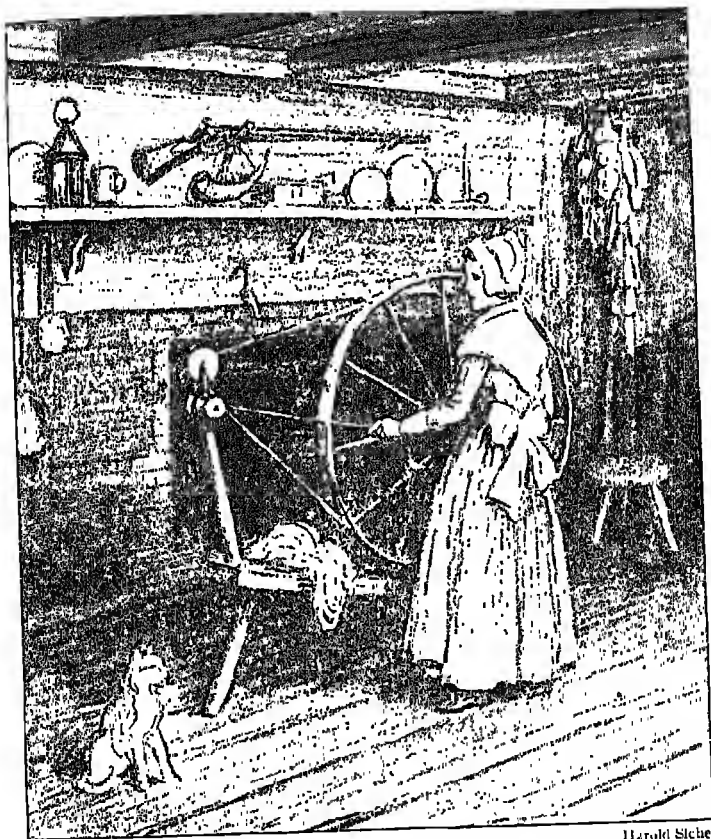


FIG. 117. Spinning yarn was every woman's work in the frontier days

He nailed together a wooden frame like that shown in figure 118. On this frame he put eight spindles so that they could all be turned together. The eight

wheels could spin eight times as much yarn as could the single spinning wheel. Later Hargreaves increased the number of spindles which would all turn at the same time.

Years passed. One invention led to another. Bigger and bigger became the spinning frames, with more and more spindles of yarn winding at once. More years passed. Steam engines were invented and fastened to the spinning frames to make them go. Finally electricity was used, and the frames were made still bigger. Today, as a result of all this inventing, cotton and woolen yarn is spun by giant machines like those in figure 119.

Changes also took place in the way people wove the yarn into cloth. Even when our great-great-grandfathers were building the first homes in "the West," their wives and children were still weaving cloth on a hand loom something like that in figure 50.

But "back East" in Rhode Island there was an English weaver named Samuel Slater, who had come to the United States about 1790 and had built a "mill," or factory, in which he put machines that would weave cloth more rapidly than before. Slater's mill was on the bank of a river beside a water wheel. The moving water of the stream turned the water wheel, and that turned the weaving machines — the looms — in the mill.



FIG. 118. Hargreaves's spinning jenny

Do you see what a saving of labor that was? A single water wheel could run many looms. Back and forth, up and down, they went, all day long, weaving hundreds of yards of cloth. And all the weavers had to do was to stop and start the machines at the right time and tie the threads that broke.

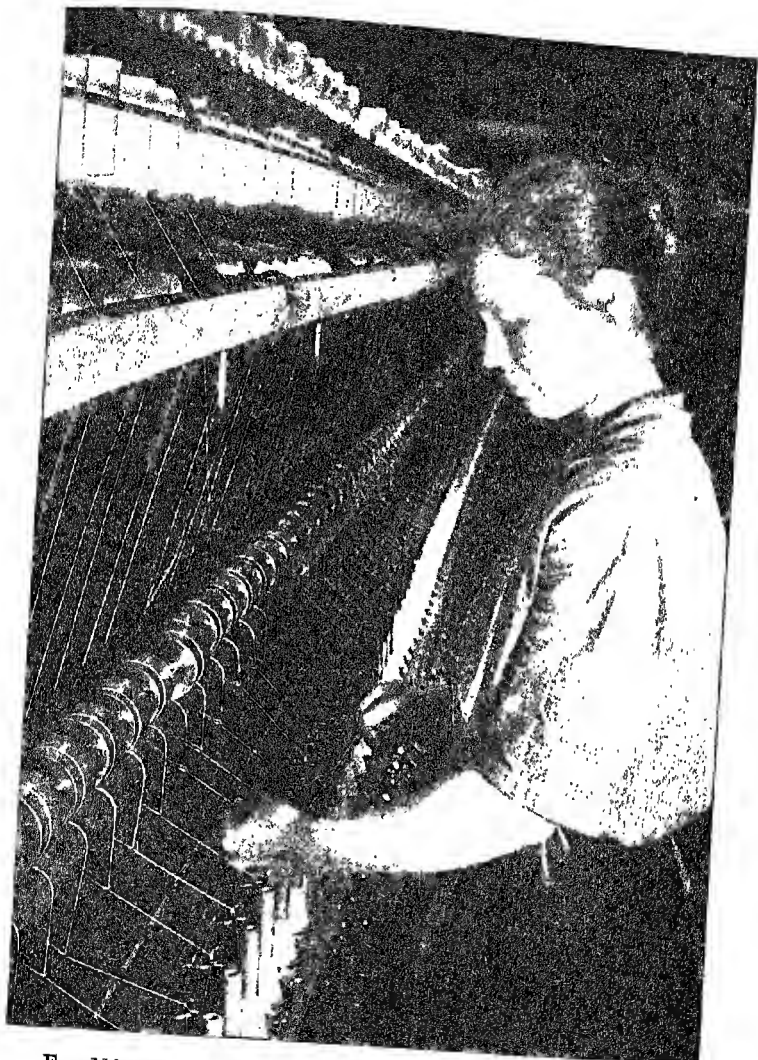
As the years passed, more and more weaving mills were built. Bigger and bigger they grew. Steam engines were invented and fastened to the looms — engines strong enough to run thousands of looms. Then electricity was discovered, and electric engines were made. Finally the mills became so big that more cloth could be woven than the people could buy.

But for 50 years after Samuel Slater's time the women of America still had to sew by hand the garments which they made. Then came another important invention. Let us see what that was.

3. Elias Howe and His Invention

One day in 1845 a man sat in front of the Quincy Hall clothing factory in Boston. Beside him sat five seamstresses, women who earned their living by sewing. He and they were sewing garments in a race with one another.

The crowd watched with surprise as the cloth ran swiftly under the man's fingers. Two hundred stitches



Margaret Bourke-White

FIG. 119. How many times as much thread do you think this worker can spin in comparison with the housewife of frontier days?

a minute it went! The women tried their best to keep up with him, but they could not take more than 30 stitches a minute. The man was sewing more cloth than the five seamstresses together! His seams were straighter and the stitches were more even.

What a strange thing was happening! Here was a man sewing in a race with women and beating them so easily! Who was he? How could he do it?

The man was Elias Howe, a mechanic who worked in Davis's machine shop near by. He was a very poor man. For many years he had worried about money. He was never sure how he would be able to pay for the next meal for himself and his family.

One morning in 1839, as he was working in the machine shop, he was thinking about how he could earn more money. An inventor called at the shop and showed a model of a knitting machine. Howe was sitting at his work near by.

"Why do you bother with a knitting machine?" asked Davis. "Why don't you make a sewing machine?"

"I wish I could," replied his visitor; "but it can't be done."

"Oh, yes, it can," said Davis; "I can make a sewing machine myself."

"Well," answered the caller, "you do it, and you will have a fortune."



FIG. 120. Elias Howe and his race with those very skillful seamstresses. Is there any doubt about who will win?

"A fortune for a sewing machine!" was the thought that flashed through Elias Howe's mind as he listened to the conversation. "Maybe I can be the man to invent that very thing."

For years afterward the idea stayed with him. But he would need money to experiment. Finally a well-to-do neighbor lent him the money and allowed him to use his attic as a workshop.

For several months Howe worked in his friend's attic. At last the sewing machine was finished. It ran smoothly and stitched evenly as Howe tried it out on suits of clothing for himself and his friend. Later he used it in his contest with the seamstresses and proved that the invention was a success.

Did People Want Howe's Machine?

Then what do you think happened? Howe found that he could not sell his machine. Tailors would not buy it. Perhaps they couldn't buy it, for the price was \$300. You see that was in the days before machines for making other machines were invented. A sewing machine had to be made by hand, and so it was very expensive.

Not only did the tailors find the cost too high, they looked with fear and doubt upon Howe and his sewing machine. It was the same story as with other inventions. In the earlier days in England workers had

smashed the spinning and weaving machines. The same thing happened in France. A Frenchman named Thimmonier had made another kind of sewing machine in 1830. The tailors who saw this machine were afraid it would throw them out of work, so they smashed the machines into pieces. In America tailors were afraid of Howe's machine in the same way. People always seem afraid to take up new ideas. Why do you think that is true?

But as time went on, sewing machines were greatly improved by other inventors. The best and strongest machine was turned out in 1851 by a man named Isaac M. Singer. Singer, who was a very clever business man as well as an inventor, worked out the plan of installment payments. This made it possible for even poor people to have machines by paying for them in small amounts of money at a time.

Singer sent his agents to the small towns of the country to show what the sewing machine could do. As a result more and more machines were bought and the price of the machine dropped from year to year. Singer machines are sold even today. Perhaps your mother has one.

Think back for a moment to what we have learned about four kinds of inventions that changed the making of cotton clothing.

First, Eli Whitney's cotton gin made it easier to clean cotton; it increased the amount of cotton that was raised.

Second, the spinning frame made it easier to spin cotton yarn; it increased the amount of yarn that was spun.

Third, the weaving loom made it easier to weave cloth; it increased the amount of cloth that was woven.

Fourth, the sewing machine made it easier to make garments; it increased the number of garments that were made.

We have a name for garment materials. We call them textiles. Thus we can say that along with the changes in farming, there came changes in textile manufacturing.

Many Other Kinds of Inventions

The machines we have mentioned are only a few of the thousands that were invented in the towns and cities east of the frontier. There were machines for making shoes: clever machines that could bend and twist the leather just like human fingers, machines that could sew and tack, shape and polish.

There were machines for making hats, and machines that could knit stockings. There were machines for cutting and making dresses and overcoats. Year after year the inventors thought up new kinds

of machines for making things we wear. Today nearly every article of clothing can be made by a machine.

The same thing happened in making furniture and utensils for the house. On the frontier the people made most of their chairs and tables and beds by hand. As the villages and towns grew, carpenters made these things for them. But after 1850, 1860, 1870, machines were invented for sawing and planing, boring and drilling, and polishing all the wood and metal in the making of furniture.

Building machines were also invented. Machines to dig up the old streets and to make new ones of macadam and concrete . . . machines to dig deep cellar holes for tall buildings . . . derricks and other machines to put up the great steel and concrete frames of these buildings . . . elevators to take the people and their things up and down in the buildings.

Engines Were Invented To Run the Machines

A machine will not run all by itself. Something that will make power must push it or pull it. Think of some examples :

1. A typewriter. It will not write letters or words all by itself. There must be human fingers to put paper into the machine and to press down on the keys. The fingers can do this because they have power in them.

2. McCormick's first reaper. What made it run, made it go? The horses that pulled it. Their muscles gave the power.

3. A tall windmill standing beside a farmer's well. What is it that makes the power to drive the long arms round and round? The wind blowing against them gives the power.

4. A water wheel standing in a mill on the bank of a river. It is fastened to a machine inside the mill. What is it that gives the power to turn the wheel? The moving water which pushes against the paddles. This turns the wheel, and the wheel turns the machine inside the mill.

5. A truck standing all new and shiny in the street. Suddenly a man gets into it, sits down, presses some buttons, and lightly moves some little bars. The heavy car moves. The man does not push it. He could not, for there is not enough power in his muscles. No horse could pull it. Even four of them would have a hard time to budge it. What, then, makes it move? An engine. You know that if you raise the hood, you will find the engine, or motor, as it is called, underneath. When the driver presses the right buttons the engine starts making power, and the power moves the big truck along.

Men tried for thousands of years to invent an engine that would work. But time after time they failed,

until about 200 years ago. Then some very clever men in England and in Europe and in the United States learned how to do it. It was just before 1800, just about the time the Americans began "going West," that the inventors succeeded in making engines that would move heavy things.

Although the English inventors were the first to succeed, the Americans were not far behind them. While the Mississippi Valley and the Far West were being settled, in the Eastern towns and cities the people were building factories to hold their machines and engines to run them.

As the years passed, the inventors learned how to make the engines more powerful. Bigger and bigger became the factories. Larger and larger became the amounts of food and lumber, cloth and garments, tools and machines, that these factories turned out.

In *The Story of Man at Work* we shall read more of how this was done. Then we shall understand how engines make power and run machines.

From the stories in this book we can remember that the great-grandfathers of some Americans living today were inventing clever machines and engines in the Eastern towns and cities during the very same years that others were clearing the Western lands with the simplest of tools. With their muscles they were conquering the soil as well as the forests.

But by the time they got most of it conquered — by 1880 or 1890 — other "Americans" in the towns and cities of the East had conquered the things inside the Earth. In the next chapter we shall have just a glimpse of that story.

Books You Would Like To Read

- HINE, L. W. Men at Work; Photographic Studies of Modern Men and Machines. The Macmillan Company, New York.
- HARTMAN, GERTRUDE. The World We Live In and How It Came To Be. The Macmillan Company, New York. See Chapter XX, "The Age of Great Machines." For the best readers.
- HARTMAN, GERTRUDE. These United States and How They Came To Be. The Macmillan Company, New York. See Chapter XX, "Towering Cities and the Busy Hum of Men." Excellent illustrations.
- LENT, H. B. Diggers and Builders. The Macmillan Company, New York. Tells about the steam shovel, the cement mixer, the derrick, and other things with which men dig and build.
- MORGAN, ALFRED. The Story of Skyscrapers. Farrar & Rinehart, Inc., New York. Tells how skyscrapers are built. Many illustrations.

CHAPTER XXII

Discovering the Vast Resources in the Earth

Underground Explorers behind the Frontier

WHILE THE farmers of Illinois and Iowa were plowing the grass under and planting their first wheat fields, the miners of Pennsylvania and other Eastern states were hunting for iron and coal and digging it out of the ground. While the Conestoga wagon trains were climbing the Rockies, explorers were discovering whole mountains of iron in Minnesota. Hunters in Pennsylvania were pumping out lakes of oil hundreds of feet below the surface of the earth.

As you know, there were the precious metals called gold and silver. Many a fortune was made by digging these out of the ground after the California "gold rush" of 1849. But even larger ones were made digging other things. Many a man spent his life hunting for a shiny black fuel called coal. And many others risked their lives in dangerous places to find chunks of stone with "iron" in them.

We must remember, then, that the building of our country was going on in two ways during the same years. While some millions of Americans were settling

farms on *top* of the earth in the West, millions of other Americans in the East were digging iron and other metals, coal and oil and other fuels, *underneath* it.

Our Great-Grandfathers Lived in a World of Wood and Leather

People had known how to make things out of iron for a long, long time, but they did not use much of it. In 1600, when the English settlers first came to North America, they needed only enough iron for their axes and knives and other tools, their kettles and other utensils.

Nearly everything the pioneers used was made of the wood of the forests, of the leather of animal skins, or of cloth made from the wool of sheep. Even the floors and sides and roofs of houses were fastened together by wooden pegs because iron for making nails was so scarce.

All through the 1600's and 1700's the needs of our ancestors were very simple; indeed, so simple were they that some people who have studied that time call it the "wood and leather" civilization, the "wood and leather" way of living.

We Live in a World of Iron and Steel

Look about you in your school or your home. Do you see much wood and leather? Perhaps wood is used for your houses. But if you live in a town or a

¹ From *Pageant of America*. By courtesy of the Smithsonian Institute.



FIG. 121. In the early days of our country the land was made ready for planting with wooden tools like this¹

city you see iron and steel on every side. There are steel automobiles and steel trains to ride in; steel engines and motors to give the power; steel beams in our buildings; steel elevators in which to ride up and down. Steel machines make our clothing, steel machines cultivate and harvest our crops, steel ships carry us across the oceans. Gone is the old civilization of "wood and leather." Today we live in a world of iron and steel.

Ironmaking Long Ago

Now steel is made from iron mixed with other things, and, as you know, iron is found in the earth. In some places it is deep down in the ground; at other places it lies almost loose near the surface. This mixture of rock and iron which is found in the ground is called "iron ore."

Men have known for several thousand years how to free iron from the ore. We know that the Egyptians, the Chinese, and other early peoples made things of iron; but, of course, they used it in very small quantities — only to make swords and tools and such things.

These ancient peoples knew that if they heated iron ore in a hot fire, it would turn into a tough lump which they could hammer into any shape, as long as it was hot, without breaking it. Somehow or other the hammering would drive other things that were not

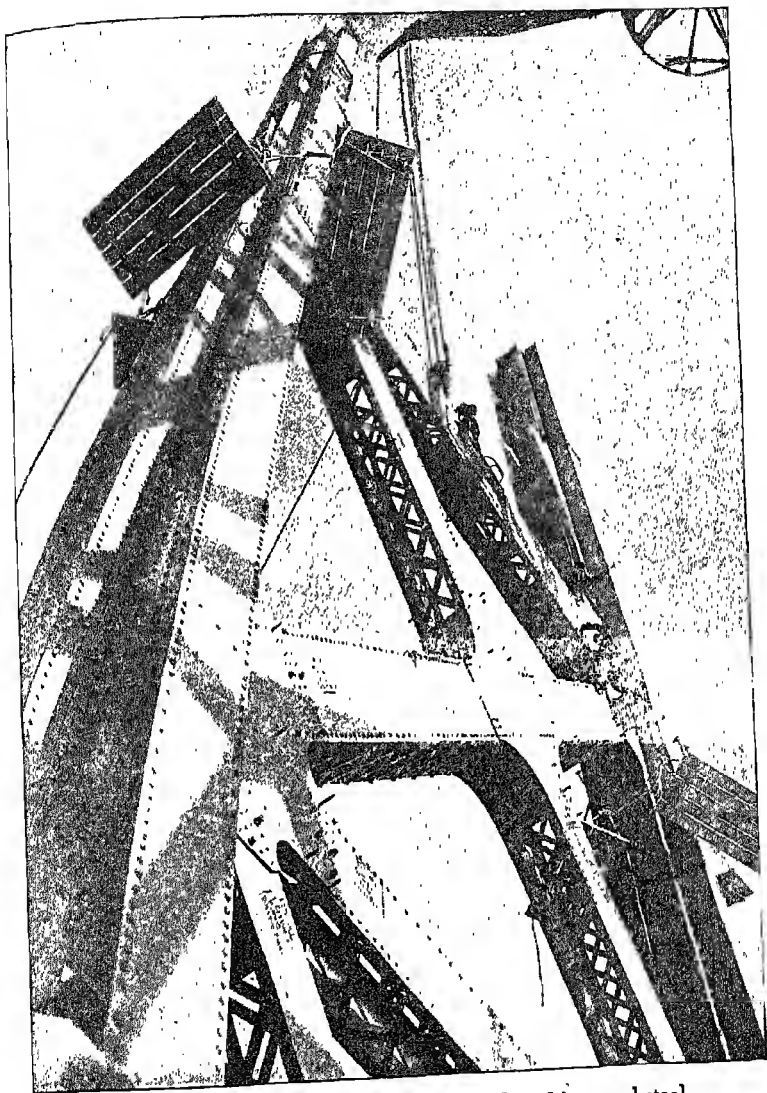


FIG. 122. Workers of today on a great bridge of iron and steel

iron out of it. Then they would heat it again and hammer it again. By heating it and hammering it time after time, they would finally get a lump of iron pure enough for first-class work.

Stone forges like the one shown in figure 123 were built in ancient days. A fire of charcoal was built and the ore was piled on it. Then air was blown through the fire with a tool called a bellows to make the fire burn hotter. So by this old, old heating and hammering way, things were made of iron until 600 years ago, when great furnaces that would actually melt the iron began to be made. A little iron of fine quality is made in the old way even now.

How the First Settlers of North America Used Iron

The very first settlers in America knew that they would need small amounts of iron for new tools, guns, and utensils. Some of those who kept diaries wrote of discovering it here and there in Massachusetts, Connecticut, New York, and other colonies. Only a few years after the beginning of the Massachusetts Bay Colony the son of the governor, John Winthrop, Jr., brought some skilled ironworkers over from England and started an iron forge at Lynn. The village where this was set up was named Hammersmith because the workmen came from the village of Hammersmith in England. Don't you think it was well named?



FIG. 123. Early ironmaking

It is believed that this iron forge was the first one to be set up in America.

Time went on and other colonies were settled. More ironworkers came and more people searched the lands for iron. In Connecticut ironworks were set up at New Haven. Old records tell of forges being started in New Jersey, Pennsylvania, and Delaware. They speak of "melting furnaces and forges . . . where is made good iron, which is of great benefit to the country."

During the 1700's ironmaking was somewhat improved. The forges were made larger. This increased the amount of iron ore that could be melted down and hammered into horseshoes, axes, and other tools and implements.

Little by little the people began to use iron for other things. One of these was nails. At first nails were made in the cottages of the people. An iron merchant would make long thin rods of iron in his forge and sell these to farmers and other craftsmen. In the long winter evenings, when little other work could be done, the whole family — the man, his wife, and children — would work at making nails. They would heat the iron rods in the chimney-corner fireplaces. When the rods were hot enough they would cut them up into nails of different lengths. Then they would sell the nails back to the merchant, and he would sell them to the customers who came to his store.



MAP 18. On this map you can locate many of the natural resources and products mentioned in this chapter

More Iron is Discovered

After 1800 came great changes. Inventors were making engines and machines. Steamboats and locomotives were being made. Strong bridges were needed so that rivers could be crossed. Stronger building materials were needed so as to build taller houses.

Engines could not be made of wood. The inventors tried that, and the engines exploded or fell to pieces. Machines made of wood quickly wore out. Some harder and stronger material was needed.

"Iron! Give us iron!" cried the inventors.

"More iron!" cried the manufacturers of machines.

"Stronger iron," said the bridge-builders and the railroad-builders.

So engineers went up and down the hills and mountains and valleys of America hunting for iron. Here and there in New England and Pennsylvania and New York they had found fairly large amounts. There the iron forges had grown somewhat bigger.

Some small iron fields had been opened, but these would not turn out enough to satisfy the needs of the people. Even the famous Cornwall mines near Lebanon, Pennsylvania, which had been owned by the Grubb and Coleman families for more than 150 years, were not rich enough.

There were excellent mines in New York, on Lake

Champlain, from which thousands of tons of ore were being turned out. But even that was not enough.

The answer to the call for iron came from the land of the Dakota Indians near Lake Superior.

For many years white men who lived there had heard Indian yarns of "iron hills and rivers that ran red." But they were not interested; they wanted gold. In 1845 two men looking for gold came suddenly upon a great cliff of iron ore. "The Indians were right after all!" they exclaimed. "Here's their Iron Mountain. But what good is it? Let's go on and find gold."

There was one group of men, however, who believed that some day iron would be needed in great quantities. They were the Merritts — five brothers and two nephews. Their father had once said, "The iron mines under the Me-sa-bi will be worth all the gold in California." His sons and grandsons, who traveled up and down that country getting out lumber, believed him and searched for iron.

One day the wheels of their lumber wagon sank deep into soft red earth. This soil was heavier than the brown soil of the farming lands. "There's iron in it!" one exclaimed. But who had ever seen iron that was like dirt? Iron was hard and in rocks!

But the Merritts knew that this was iron. They hired miners. But the miners made fun of them. One even declared: "This is no mine! How can you dig a

shaft and get out iron when the dirt falls into the hole as fast as you dig it out? It just *can't be* an iron mine." And they refused to dig. Finally, in 1890, another miner agreed to dig as ordered. Pure, soft iron ore! There it lay in huge amounts — ore that could be shoveled like dirt (figure 124).

Soon other adventurers went into the region in search of iron. Engineers went with crews of diggers. Mines were opened and villages and towns sprang up. Bigger and bigger amounts of iron were scooped out. They were loaded first on wagons and then on boats to be taken through the Great Lakes to the ironmaking places in Ohio and Pennsylvania.

Kelly's New Way of Making Iron Pure

Even in the 1840's, however, iron was freed from its ore on hand forges by the old heating and hammering way. Of course ironmakers had been trying to invent ways of separating the iron from the rock and other things by quicker and cheaper methods. But no way had as yet been successful.

Then in 1846, the very year after the Merritts had found soft iron ore in Minnesota, a Kentucky kettle-maker named William Kelly made an exciting discovery. One day he was sitting in front of the little furnace in which he made iron. The melted metal in the furnace glowed bright and yellow. Suddenly Kelly

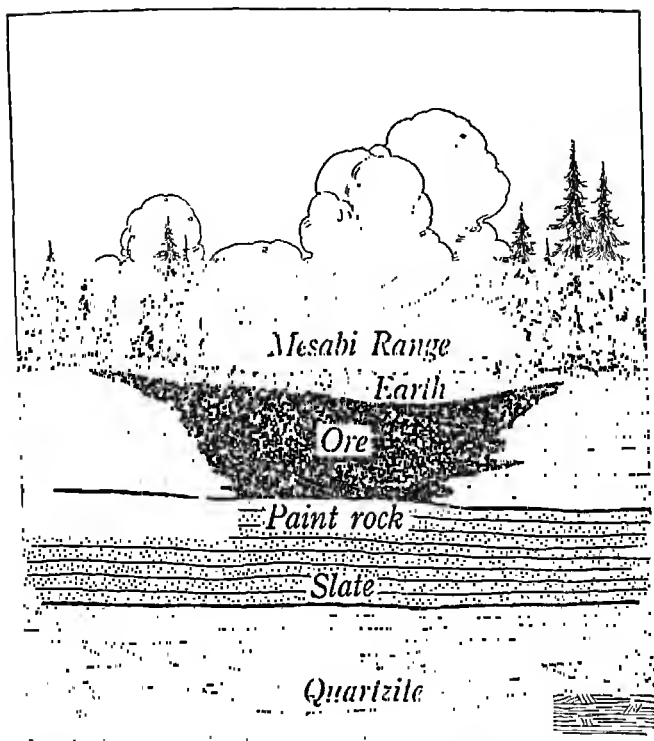


FIG. 124. The iron ore in the Mesabi Range lies near the surface of the earth

noticed a strange thing. Over at one edge of the hot metal there was no charcoal (the fuel he was using for his fire). There cool air blew over the iron, and from it came a hot and blinding-white flame. "It's strange," thought Kelly, "that the hottest spot should

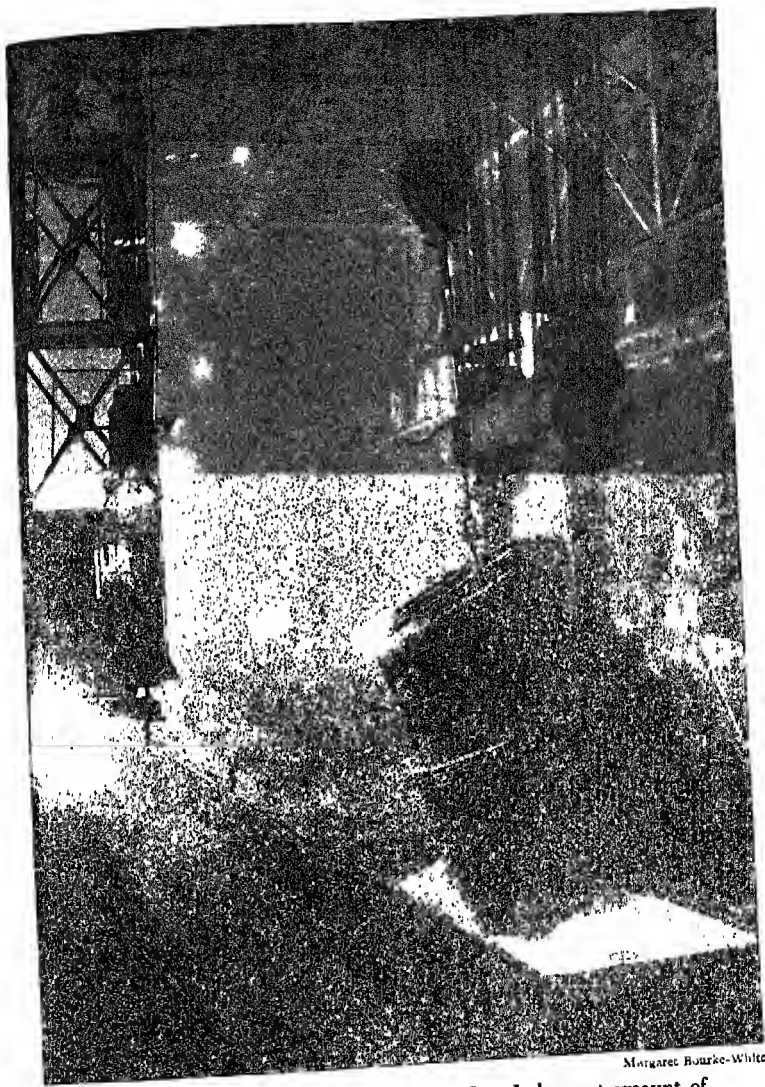
be at the very edge where cold air is touching the metal."

And then there came to Kelly the idea which was to help to make the manufacturing of iron an easy matter. He jumped to his feet with a shout. He ran out to tell his friends. He was so excited that the neighbors thought he was crazy. Only two or three listened to him — two English ironworkers and the village doctor. This is the way Kelly explained his idea to them:

"In our furnaces we now put layers of charcoal which get hot enough to burn the impure things out of the ore. You know how slow that is. Now these things can be removed in a much easier way. By blowing air through the hot metal they can be burned out in a few minutes instead of being melted out in the way we have been doing."

For ages men had tried to keep cold air away from the hot iron lest it cool suddenly. They did not know that air blown through the melted iron would really make the heat greater. Kelly was the first to discover this.

Of course he did not try to keep his discovery a secret. He called in the ironworkers of his neighborhood to show them how it was done. Most of the iron-makers from western Kentucky came and stood about Kelly's furnace. They were really making fun of him



Margaret Bourke-White

FIG. 125. In mills like this one is produced the vast amount of steel which we use today

and said that he had gone a little crazy. But Kelly paid no attention to them. With a bellows he blew air through some melted pig iron. To everyone's amazement the metal grew white-hot.

Then a blacksmith seized the iron, cooled it, and in 20 minutes shaped from it a fine horseshoe. He flung it at the feet of the ironworkers, and then, seizing another scrap of the metal, made nails and put the shoe on a horse that stood near.

Impure iron, which cannot be hammered into anything useful, had been changed into soft, pure iron or something very much like it without the use of more fuel. But still the ironworkers were not convinced. Seeing was not believing.

"Some crank 'll be burnin' ice next," said one. The ironmen shook their heads and went home.¹

How People Received Kelly's Invention

Men who tested the steel made by Kelly's "air process," as he called it, said that it had no impure things in it. Yet, strangely enough, people would not use it. His customers told him flatly that they wanted iron made by the good old way, and that if he didn't make it that way they would get their iron from someone else. Even his wife's father, who was giving

¹ This story is adapted from H. N. Casson's *Romance of Steel*, pp. 5-7. Used by permission of Laidlaw Brothers, Inc., owners of the copyright.

him money for the business, said that he would stop helping him if Kelly did not "quit his foolishness."

So Kelly struggled along alone, a very poor man for years. But he continued to build furnaces for heating the iron, improving them as the years went on. Seven different ones were made before he was ready to have a real test.

Seven years after Kelly discovered the "air way" of purifying, or refining, iron, Henry Bessemer discovered the same thing in England. Bessemer was already a famous inventor, and most people think he was the first to use the air process. But William Kelly, the Kentucky kettle-maker, was really the first.

We shall learn in *The Story of Man at Work* how other inventors improved upon the Kelly-Bessemer way of making iron. They learned how to make huge amounts of steel in furnaces 100 feet high. They

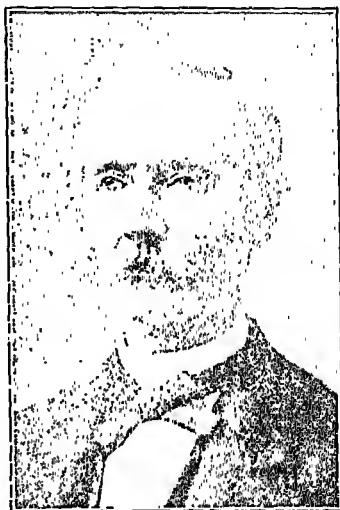


FIG. 126. William Kelly¹

¹ From *The Romance of Steel*, by H. N. Casson. Used by permission of Laidlaw Brothers, Inc., owners of the copyright.

learned how to roll out a steel railroad rail in a few minutes. They made iron frames by stamping with one blow of a machine.

Bigger and bigger became the amounts of steel that were made by the new methods. Bigger and deeper became the iron mines. More and more were Americans conquering the metals in the earth.

The Need for Fuel To Run the New Engines

"Give us engines!" cried the factory-owners. "More engines to run our machines!"

"Give us locomotives!" said the railroad men.

"We need steam engines to run our boats up and down the rivers!" called the steamboat-owners.

So, in the years following the 1830's and 1840's, more and more factories turned out steam engines. Then came another problem, What fuel should be burned to make the engines go?

You know what fuel is — anything that can be burned to make heat or power. Wood is a fuel. Coal is a fuel. Oil is a fuel.

As you know, the settlers in America had chopped down the trees and used the logs for fuel. They had burned them in their fireplaces, and in their iron forges to melt iron out of the iron ore. As long as there were forests and they did not need much heat, timber was a good enough fuel for our ancestors.

Discovering the Resources in the Earth 411

But after engines and locomotives were invented, they found that wood would not do. The logs were too big and clumsy. They burned too fast and did not make a hot enough fire. So the manufacturers tried to find new fuels to burn.

The Hunt for Coal

A fuel was found that would do very well — coal! As you know from your study of *Peoples and Countries*, Europeans had used coal for hundreds of years. So when the first English settlers came to North America they knew how to use coal as a fuel. During the first 150 years of building settlements on the Atlantic plain small amounts of coal were found here and there. It was not until after 1750, when the pioneers had crossed the Appalachians, that much was found.

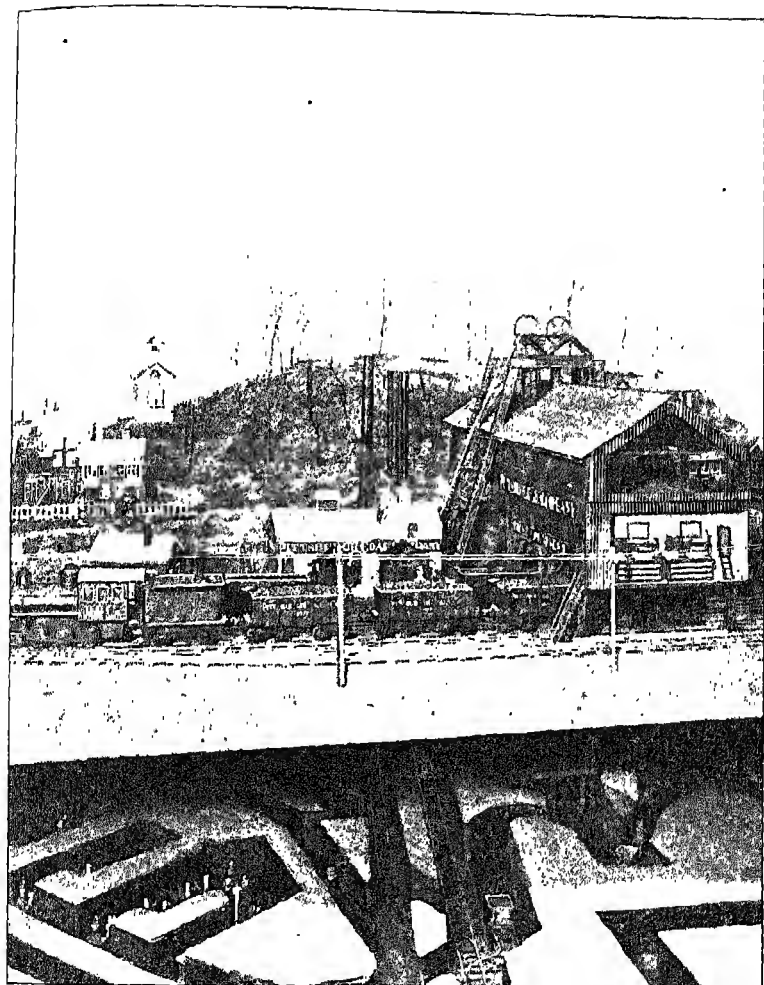
You remember from the story in *Communities of Men* how coal was found opposite the place where Pittsburgh grew. Men sent out to look for it later found that the Allegheny Mountains were simply filled with it and that it was some of the very best coal in the world.

So workmen began to dig into the earth. Soon great mines were opened all through the mountains. People came there to work. Villages and then towns grew up around the mines. The whole region became a place of coal mining.

Time passed — the 1840's . . . the 1850's . . . the 1860's. Still the ironmakers, the railroads, the factory owners, talked about coal and more coal. Soon even the rich coal fields of Pennsylvania could not supply what they needed. So men were sent exploring again — through Ohio, Kentucky, Tennessee, Indiana, Illinois, and across the Mississippi to the west. Northward they went to Michigan, near the Great Lakes.

All through the Middle West new fields of coal were found. Nor were they little ones, like the fields in the Pennsylvania mountains, with only 500 square miles of land; they were huge, covering a half-million square miles. Most of the coal was in western Pennsylvania, West Virginia, Ohio, Indiana, and Illinois, although there was some west of the Mississippi River. It was excellent fuel, too — some of the best soft coal in the world.

Here, then, was more wealth for the settlers of the new country. But it was wealth hidden deep down in the earth. For millions of years it had lain there. It was made, as you know, when great forests had been pressed down inside the earth and earthquakes had pushed up the earth's crust. Millions and millions of years had passed and layer after layer of this material had hardened. Slowly these forests had become coal.



United States National Museum

FIG. 127. In this picture a part of the ground is supposed to be cut away so that you can see what is going on below the surface. Note the tunnels where miners dig the coal. From there it is sent above the ground and away to other parts of our country

Indians had lived over the green fields of the Western plains without knowing or caring what was underneath. It was not until the white man needed a better fuel for his engines and machines that people began to dig beneath the surface for this valuable coal.

In all the states west of the Appalachians and across the Mississippi River coal mines were opened. Deeper and deeper into the earth the miners dug, removing great loads every day. Wagons, railroad trains, coal barges on the rivers and canals, were piled high with the black fuel.

To the cities and towns all over the country it was shipped. It ran the engines of the factories. It heated the houses of the city people. It made the steam of the railroad locomotives. It ran most of the power stations. It helped to light the towns of the East.

So it was, especially after 1850, that coal became "king." And so it was that the new fuel helped to conquer the continent.

The United States Became a Manufacturing Country

Do you see from these stories that the forests of America were chopped down, the land cleared, and farms made in the building of our country? And that during the very years that the westward movement was going on, millions of other people were building eastern America into a new kind of country?

It was to become a country where people changed from doing work by hand to doing it by machine. They began to carry things with machines; to dig with machines; to pave the streets, to mine coal and iron, with machines. They wrote letters and kept accounts with machines. They telephoned and telegraphed with machines. The whole life of many of our people became a "machine" way of living. We speak of it as a "machine civilization."

You already know the story of some machine civilizations from *Peoples and Countries*. In England, France, Germany, northern Italy, and now Russia the same changes have taken place. Villages with little thatched cottages slowly became towns with houses of bricks and wood and stone. Small towns became big towns, big towns became small cities, and small cities became large cities.

There is another name for this new machine way of doing things. We call it "industrial." England is an industrial country. France is an industrial country. Germany is an industrial country. Russia is becoming an industrial country.

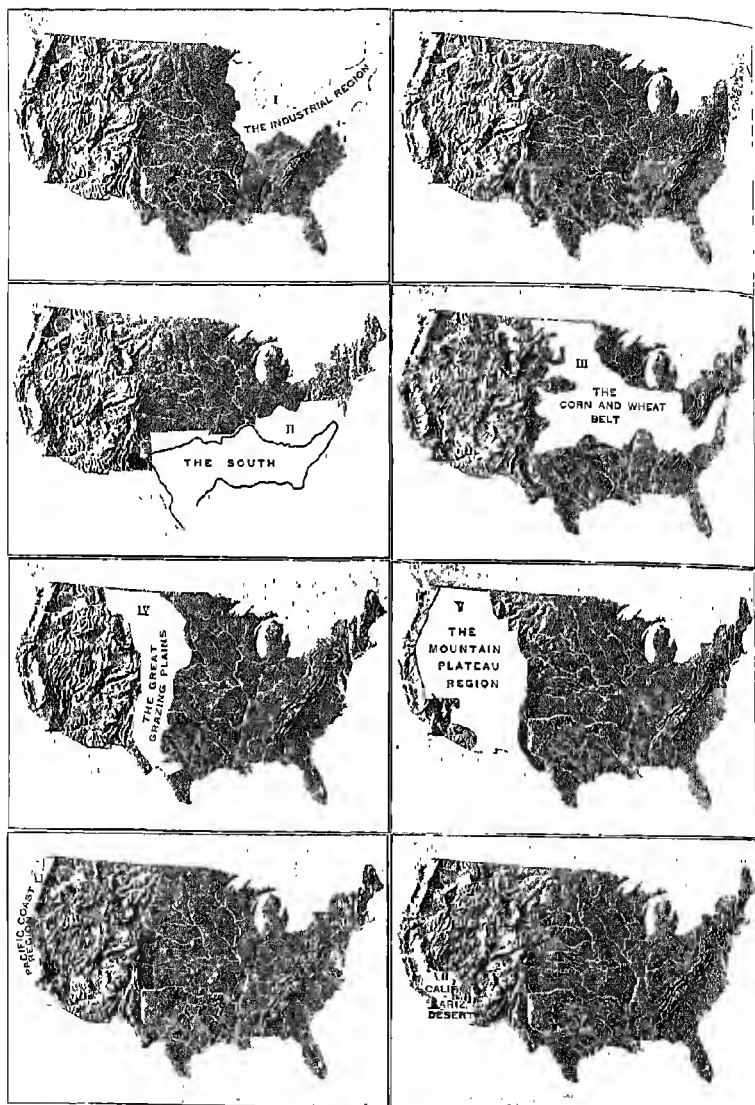
Like these countries, the United States too is an industrial country. During the very years when the land was being settled, machines and the machine way of living were making our country into one of the industrial nations of the world.

Books You Would Like To Read

- CARPENTER, FRANK GEORGE. *How the World Is Housed*. American Book Co., New York. See Chapter 16, "Iron"; Chapter 17, "Mining Iron"; Chapter 18, "In the Furnaces and Rolling Mills."
- ELIOT, ETHEL C. *The Little Black Coal*. Frederick A. Stokes Company, New York. The history of coal simply and interestingly told.
- JORDAN, D. S., and CATHER, MRS. K. D. *North America (High Lights of Geography)*. World Book Company, Yonkers, New York. See Chapter X, "Nature's Treasure Chest: a Story of Minerals."
- PETERSHAM, MRS. M., and PETERSHAM, Miska. *The Story Book of Earth's Treasures*. The John C. Winston Company, Philadelphia. Stories of gold, coal, oil, and iron and steel.
- TAPPAN, E. M. *Diggers in the Earth*. Houghton Mifflin Company, Boston. One of a series of industrial readers.

PART VII

The Regions of Our Country Today



MAP 19. The chief regions of the United States

CHAPTER XXIII

The United States Today: A Country of Different Regions

THE STORY of the building of our country has shown us that nature had divided the continent into many "natural" regions. When our forefathers came they settled in these regions and developed their ways of living within them. We have read interesting stories of the adventures of these brave men as they moved westward across the continent. We saw them build their farms and villages in the Hilly Belt of New England and the Atlantic Coastal Plain. With some of their children's children we crossed the Appalachian Highlands and saw them settle the Great Central Plain. We watched others raising cotton on their plantations in the South. With still others we climbed the Rocky Mountains, the broad western plateaus, and more ranges of lofty mountains into the fertile valleys near the Pacific coast. Their children settled in the high plains and brought water to the southwestern deserts. It was, indeed, an exciting story of the conquering of a part of the continent and the building of our country — America.

The United States Became a Country of Differing Regions

Before we leave our study of the building of America we shall wish to understand how different ways of living developed in the different regions. The cotton-growing South became a very different region from the corn-and-wheat section of the Central Plains, the mountain mining region of the West, or the industrial region of the northeast. The stories we have read told us what was true 50 to 100 years ago. Let us see how true it is in our own time.

Although we could divide our country into many small regions, we shall discuss the seven largest and most important ones. On map 19, page 418, those seven have been marked out clearly.

1. The chief industrial region.
2. The "South."
3. The agricultural belts of the Great Central Plain.
4. The great grazing plains.
5. The Western mountains and the plateaus between.
6. The Pacific-coast region.
7. The California-Arizona desert.

Do you think these regions are about the same as those into which the settlers first went? Some of them are, but others are much larger than they were in those early days.

1. The chief industrial region, which not long ago included only New England and the middle Atlantic states, now extends westward to the Mississippi River.
2. The great cotton belt of the South has also extended westward, far beyond the Mississippi.
3. The agricultural belts of the Great Central Plain have extended northward to include North Dakota and Montana and westward to include Nebraska and Kansas.
4. The grazing plains are much as they were, though in the moister eastern section more farming than grazing is now carried on.
5. The mountain-plateau region covers the same area as it did when the first settlers found it, but since that time many important industries have been developed there.

Two new regions have been opened up :

6. The Pacific-coast region.
7. The California-Arizona desert.

Differences in Land and Climate Make for Differences in Ways of Living

We have also seen some of the important reasons why the ways of living are different in these regions.

First, we have learned how huge our country is. It stretches nearly 3000 miles from the Atlantic to the Pacific and 1200 miles from Canada to Mexico. Such a vast land must include differences in climate. It does indeed.

The northern boundary from Maine to Washington is located at about 48° north latitude; the southern

boundary, at about 30°. Partly because of this difference in location on the earth's surface, the climate (that is, temperature, rainfall, and winds) in the northern regions is different from that in the southern ones.

Second, there are differences in altitude, which means differences in height of land. Though the Western mountain region has an altitude of from one to two miles, the level Central Plain is scarcely above sea level.

Third, there are differences in soil and vegetation, in coal, oil, metals, and other natural resources. In some regions, as in New England, the soil is stony and gravelly, good for raising fruit and hay. In others, as on the Great Central Plain, the soil is deep and fertile, excellent for the growth of corn, wheat, and other grains.

In the low Appalachian Highlands of the east are large deposits of both hard and soft coal. In the plains and hills of the north-central states are huge fields of iron and other fields of soft coal. In the high mountains of the West are deposits of copper, lead, zinc, gold, silver, and other metals.

There are also differences in vegetation. In some regions grow vast forests and tall, thick grasses; other regions are wastes of sand, with almost no shrubs or trees.

Again we see that differences in ways of living are brought about chiefly by differences in location on the

earth, which gives different climates; by the height of the land above sea level; by soil and vegetation, fuels and metals, and other natural resources in the earth.

We learned in *Peoples and Countries* about China and India, Russia and Great Britain, and other countries. Each of these countries is made up of various regions, just as the United States is, and each region is different in some ways from the others.

In the remaining chapters of this book we shall review quickly the ways of living in the seven regions of the United States.

First, in Chapter XXIV, we shall discuss the chief industrial region.

Books You Would Like To Read

See the titles at the end of Chapter XXXI.

CHAPTER XXIV

I. The Great Industrial Region of Manufacturing Towns and Cities

YOU ALREADY know what an industrial region is — the part of a country in which there is much manufacturing by machine. Most of the people crowd together in cities and towns. They work in textile factories and steel mills, machine and railroad shops, mines and power stations, stores and offices.

In *Peoples and Countries* we saw that most of the modern countries of the world have such industrial regions. Germany has its Ruhr Valley, a region of coal mines and steel cities, and England its "Black Country" of manufacturing centers. France has its northern industrial section, and Russia its manufacturing centers in the Urals and in Siberia. In each of these regions most of the people live in cities and work in one or another kind of manufacturing.

While industrial regions were growing in Europe a large industrial region was also developing in the United States. While the western part of our country was being settled, villages and towns were growing up east of the frontier. From *Communities of Men* you

know that some of these little communities, like Brownsville, were fortunately located. They were in sheltered harbors, on large lakes, or at the point where rivers joined. These became the port communities. Others were near valuable coal or iron or oil fields. These became mining or manufacturing cities. Still others were in the center of fertile farming lands. These became trading towns for the farmers.

Larger and larger grew the villages. Some became towns; a few became cities. We have already read stories of how some of these grew. Here are a few more examples.

Two Cities That Grew in the Industrial Region

The First Example: Providence, Rhode Island

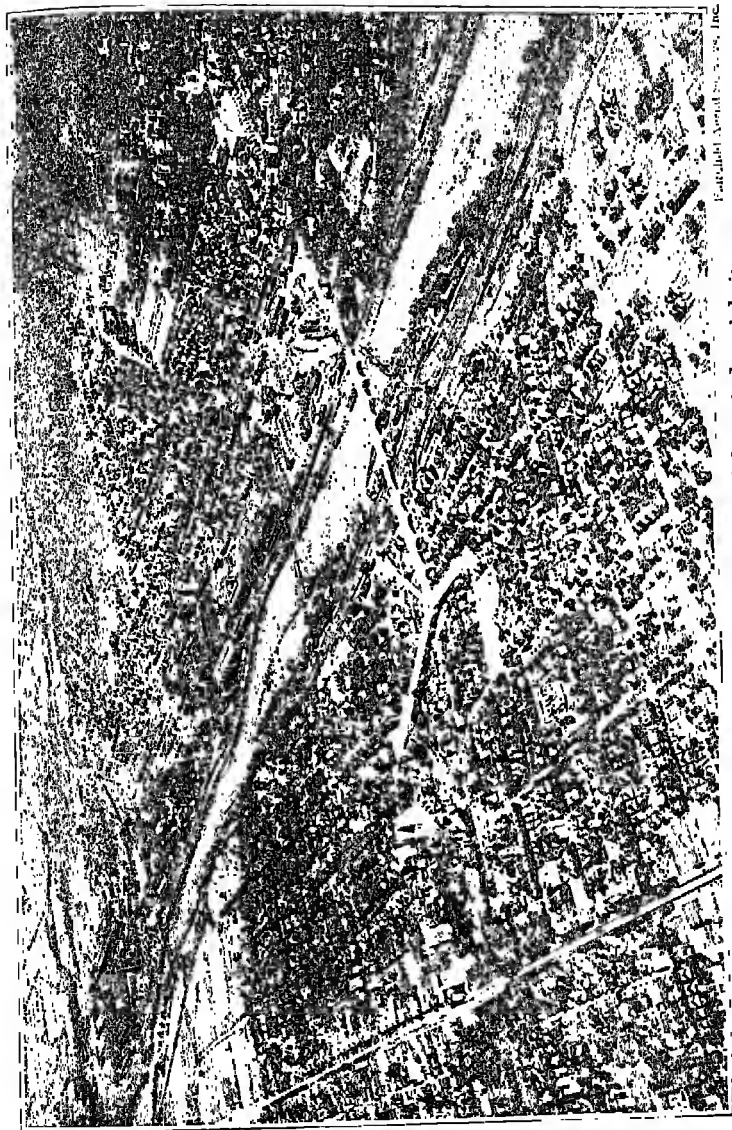
About 300 years ago a little group of colonists left the new settlements in eastern Massachusetts and pushed southwest through the wilderness, hunting for a place to start a new community. Little of the land had been settled. The colonists might have stopped anywhere and made their homes, but they were looking for a spot where it would be fairly easy to get food and shelter.

At last they came to a wide bay into which two small, swift rivers flowed. As they looked about they saw that here were the things they needed. Along the coast were thick forests which would supply timber for

their houses, wild animals for food, and furs for clothing. The rivers offered easy ways of reaching the inland country. The bay provided fish and a way to travel to the other towns on the coast. So the colonists chose that place and named their new settlement Providence.

Almost at once they cleared small patches of ground and began to plant grain. Some of them built fishing boats and sailed them through the broad bay and along the coast as far as Long Island Sound. As time went on and more people came to settle in Providence, handicrafts and industries grew. More people went into lumbering and shipbuilding. At first the lumber for the ships was cut and planed by hand with simple tools; but gradually sawmills were built along the banks of the rivers, and planks were cut from the logs by machines which were run by water power. Then more ships could be built, because lumber was more quickly prepared for use in shipbuilding. As larger ships were built they were used not only for fishing but for carrying goods back and forth.

Soon Providence people had built up a world-wide trade. Their ship captains bought sugar and molasses in the islands of the West Indies and brought it to Providence. Here much of it was made into rum. The rum was then shipped to the coast of Africa and exchanged for Negro slaves. The slaves were brought



Eastland Aerial Survey, Inc.

FIG. 128. Bethlehem, Pennsylvania. A large industrial city

back to the West Indies and traded for molasses and sugar, or to the Southern colonies and traded for rice and tobacco. Trade was also carried on with Europe, and now and then a ship went way out to China.

In the meantime, of course, the people of Providence needed manufactured goods. At first they bought these from the business men of England, giving in exchange tobacco and rice, flour, salted fish, furs, and timber. After 1800, however, as spinning and weaving machines were improved, mills for the making of cotton cloth were built beside the streams near Providence. As the shipowners of the city brought larger amounts of cotton from the Southern states, the spinning of yarn and the weaving of cloth grew into an ever-larger industry. More people — newly landed immigrants and people from the farming districts which had grown up close by — came to Providence to work. Steadily the city grew.

Later steam power slowly took the place of water power. The Providence business men brought coal from the Appalachian region to run their mills and factories. Other manufacturing industries grew. Foundries and machine shops were set up. Since all these industries required both skilled and unskilled laborers, the population increased. Then more houses and more stores were needed. Larger public and private build-

ings were built and schools and churches were established. Almost every addition to the work of the city increased the need for still more people.

So today, 300 years after the first settlement, Providence is a manufacturing and trading city with a population of more than 250,000 people.

The Second Example: Schenectady, New York

In the days of the colonies one of the principal ways by which the settlers made their living was by trading with the Indians. Much of this trading was done up and down the Mohawk River, which lies in a broad valley in east-central New York and flows southeast into the Hudson. Just before it pours itself into that river, there is a long, shallow stretch with rapids and waterfalls. These acted as a barrier around which the traders and Indians were forced to carry their canoes and goods. This was called a "portage," or "carry." The Indian name for this word was *Schonowe*, meaning "gateway."

In 1662 a Dutch trader brought a band of settlers from the place where Albany now stands across the sixteen-mile wasteland to the falls in the river. There they stopped and built a settlement. They knew that everyone coming up and down the river would be obliged to pass their community, and that therefore it would be a good place for trade. What happened

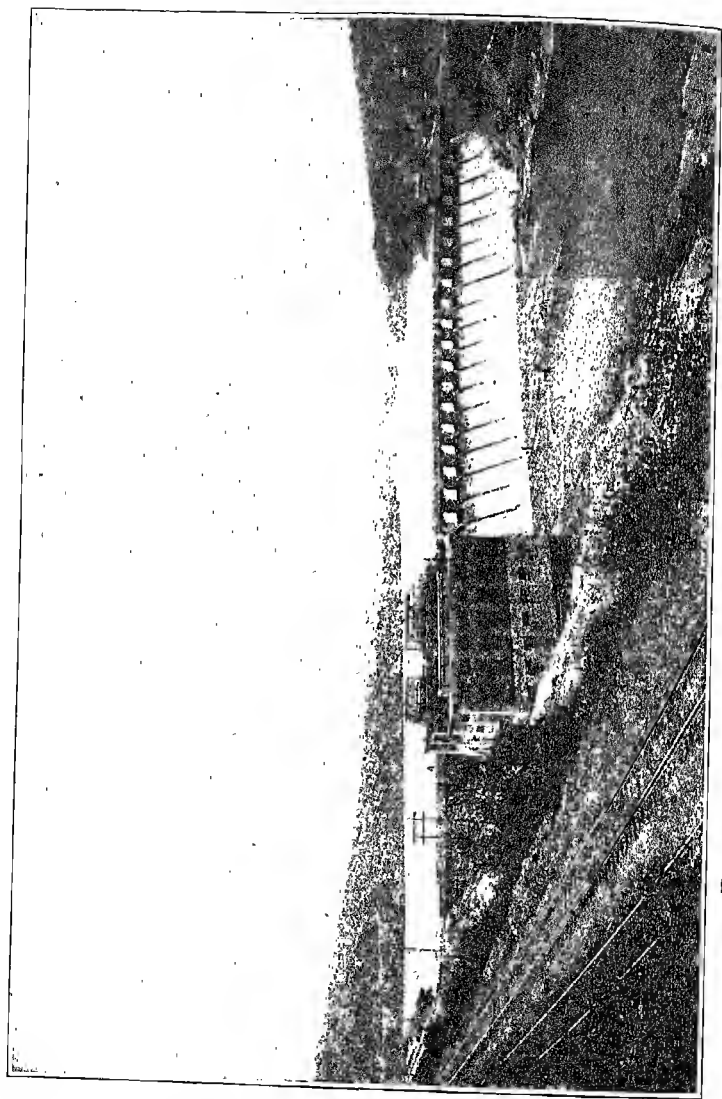


FIG. 129. All over our country power stations like this one change water power into electricity to help man in his work.

later proved that the settlers were right. Hunters came there to exchange the skins of animals for guns and powder and food. Traders came there to buy the skins. Gradually the settlement grew as more and more people came up the river. Some of them stopped and decided to settle there, and "Schonowe" became the growing town of Schenectady.

For many years it was a frontier town, always in danger of attack by Indians. More than once many of the English and Dutch in the town were killed during a raid. But it was such a good trading place that in spite of the danger people went there to live.

After a while manufacturing started because the falls provided excellent water power. Stores were opened to sell goods to the workers in the factories. The settlement became a town. In 1825 the Erie Canal was completed. Schenectady was situated on the canal; and as travel and freight traffic grew, Schenectady, like the other cities of the Mohawk valley, grew with them.

After 1830 the first railroads were built up the Hudson and through the level Mohawk valley. One of the very first of these joined Albany and Schenectady. When the railroads of that region were joined to make the New York Central system, Schenectady became an important railroad town.

¹ Courtesy of the Connecticut Power and Light Company.

As steam power began to take the place of water power in the factories of the United States, Schenectady too began to use this kind of mechanical power. By means of the new railroads coal could now be brought easily from the mines of Pennsylvania. Then more and more businesses began in Schenectady, and the city grew rapidly in size. Today it numbers about 96,000 people. Of these about 20,000 are employed by one manufacturing company alone.

These cities — one in Rhode Island and the other in New York State — are but two out of hundreds of cities and towns that were growing up after 1800 all through the northeastern region of our country. Think back a moment to the things we learned about them in *Communities of Men*. We learned that there were many kinds of communities and many reasons for their growth. Let us bring some of them to mind.

Large Port Communities Grew at Good Harbors

Almost all the very largest manufacturing and trading cities of the United States began at good harbors. Some of these were on seacoasts; some were on the Great Lakes; others were on large rivers. In *Communities of Men* we saw how New York, on the east coast, became one of the great eastern gateways to the interior of the continent; how New Orleans, on the

Gulf of Mexico, was the southern gateway; and how San Francisco was a gateway on the western coast.

On map 3, pages 10-11, you will find two deep cuts in the coast line of eastern United States just south of New York. One of these is Delaware Bay, into which flow the Delaware and other rivers; the other is Chesapeake Bay, into which flow the Susquehanna and many small streams. These bays and rivers make well-protected harbors, and on them have grown two of America's largest port communities — two more eastern gateways to our country.

Philadelphia: A Large Port City in the Industrial Region

The first and largest of these gateways is Philadelphia. With about 2,000,000 people, it is today the third largest city of our country. But 250 years ago Philadelphia was only a tiny settlement.

In November, 1682, the good ship *Welcome* made its way round the tip end of the peninsula of New Jersey and sailed up the broad Delaware bay. On board was the peace-loving William Penn and 100 other members of the English Society of Friends, or Quakers. The Quakers hated war and would not respect the king and lords of England, who seemed always to be planning war. Now, because they wanted peace, they were coming to America to make their homes in the wilderness.

On up the Delaware River went the *Welcome*. At last it came to a lovely spot, and William Penn and his people landed and decided to build a village there. They called it "Philadelphia," which means "the City of Brotherly Love." How wisely they chose the place for their community! Philadelphia has a well-sheltered harbor with room for miles and miles of docks along the river's edge.

At first the people built rough shelters of trees and bark and bushes. Some even lived for a time in caves along the river bank. But soon they discovered they could make bricks with the clay that they found near by, and strong and attractive brick houses began to appear. These formed a more orderly town, with broad streets running back from the river. As the months passed, other shiploads of Englishmen came from across the seas. Within two years Philadelphia had become a busy and charming town of 2500 people.

The Quakers' wives were neat homemakers, and the men themselves kept a clean and attractive community. They were hard-working and saving, and soon they had developed trade with the other white settlements and with the Indians. To the meeting-house, as their church was called, and the town hall was soon added the jolly tavern the "Blue Anchor," where sailors and their officers, on "shore leave," mixed with the townspeople.

**Other Newcomers Moved into the
" Back Country " To Settle**

In the early days daring hunters and trappers went as far back as the Appalachians, hunting wild animals and bringing their furs to Philadelphia. These they would sell or exchange for goods at the new shops of the growing town. Later settlers, not being able to get land near the river, went back into this wilderness, cleared the land, and laid out farms.

William Penn had helped in the settlement of this back country by giving a vast amount of land — 40,000 acres — to some people from a part of Great Britain called Wales. People from other countries also went there to settle. There were thousands of Germans and Irish and Dutch and Scotch-Irish. They moved back even into the mountains, planted their farms, and fought the Indians, who were beginning to try to prevent their westward march.

As they did so, more trade was carried on with the town at the mouth of the Delaware River. Each year more boats, loaded with the products of the frontier farms to the West, went down the little mountain streams and on down the broad Delaware. Longer grew the pack-horse and wagon trains that made their way over the trails, returning with the goods of the growing manufacturing town. And each year more

ships came up the Delaware from other American ports and from Europe to the docks of Philadelphia. The well-placed harbor on the east coast of the country and the rich farming and village country behind it caused the city to grow.

So it was that more than 100 years passed. 1800 came and went. Philadelphia, like New York and Boston, became a larger and larger port. Years passed . . . 1810 . . . 1820. Then came the race of Philadelphia with New York and Boston and Baltimore for the trade of the West. Roads were built and canals were dug.

When railroads came, however, about 1830, Philadelphia grew more rapidly. The Pennsylvania Railroad was built along the principal rivers, winding its way in and out as the rivers did. The engineers who planned it followed the gentle slope of the river valleys. Always they sought the low passes, like the Delaware Water Gap, a gorge which the Delaware River had cut through the Appalachians.

So it was that nature helped the people to build a great port city along the banks of the Delaware River. During all the 1800's and into the 1900's it became the center of more and more factories and shops and docks. As the making and selling of things increased, more people came there to live. Finally, "the City of Brotherly Love" became what it is today — a great port community, the third largest city of our country.



FIG. 130. An airman's view of Philadelphia today. How different from William Penn's settlement of 250 years ago!

**Baltimore: Another Port Community of the
Industrial Region**

The fourth of America's eastern gateways is Baltimore, named for Lord Baltimore, to whom the king of England had given land to form the colony of Maryland.

Turn the calendar back to 1634, the year that Leonard Calvert, a younger brother of Lord Baltimore, settled with 300 colonists on Chesapeake Bay. The settlers found many little streams running into the large rivers and into the bay ; so they separated and laid out their plantations along these streams. So scattered were the homes and plantations that 50, yes, nearly 100, years passed before a town of any size grew up.

Time and again the governors tried to sell house lots close together to get the people to form villages and towns. They even made and named little towns by law. But the people would not take up the land and live in the towns. Each family wanted to be near one of the little streams. From there it could send its tobacco and other farm products easily to the big ships that stood waiting in the bay to carry these to England and Europe. So each planter cultivated his broad fields which stretched along the banks of a little stream, and met with his distant neighbors only when he wished.

Of course there was much visiting back and forth ; for Maryland was on the edge of the southland, where

recreation took up a goodly amount of time. But, because of this separation of the people, towns grew very slowly. As one famous writer said, the rivers of Maryland ran "all townless from the mountains to the sea."

Slowly, however, a few hamlets did grow up at the mouths of some of these little rivers. There was a settlement on the Bush River, as well as at "The Point" on St. Marys River. There was another on the Patapsco, where a quiet bay was formed by the curving land. Near by was a waterfall known for long as Jones's Falls.

In 1709 a town was laid out on both sides of the falls and some house lots were sold, but the town grew very slowly. Gradually roads were built out from it toward other villages, into Pennsylvania, and beyond. Traders began to come in with their wagons filled with flaxseed and other products. From time to time a few more people settled there, but even in 1752 it was still a hamlet of 25 houses and 200 people.

World Trade Made the Town Grow

After 1752, however, things began to happen. The wars with the Indians broke out, and some of the colonists out in the countryside moved into the village to be close to one another for protection. During these wars of the 1750's groups of French Canadians came there to settle. They had been driven out of their

northern home, Acadia, by the English governors who captured Canada. Business men with money came there too and began to exchange the farmers' wheat and cotton for the products of England and Scotland and the coast towns of North America.

In the 1760's marshes in the town were drained, a central market and a courthouse were built, and "the town" became the center of government in the county. That helped to bring more people, who bought land and built houses. Workmen whom we call mechanics, skilled in the use of tools, came then to work at their crafts. Keepers of shops, large and small, began to sell things.

By the time of the War of the Revolution (1775-1783), Baltimore had become a busy trading town. Although no battles were actually fought there, the men went as soldiers in the colonial army, and the women made clothes, raised food, and worked in the hospitals. When peace came and the colonies were declared independent, Maryland became one of the thirteen states of the United States, with Baltimore its largest town.

The Westward Movement and the New Railroads Helped Baltimore To Grow

When the new roads were built along the coast, the citizens of Baltimore also wanted fast transportation. They too wanted some of the inland trade. So they

thought to build canals through the Appalachian Mountains. But nature was too much for their engineers. The mountains were 3000 feet high, and it would cost too much to build canals through them.

It was the railroads that saved the day for Baltimore. There came a time in 1828 when Peter Cooper's funny little locomotive (figure 81) chugged over the bumpy stone and iron rails, and the first railroads came into use. Soon the Baltimore and Ohio Railroad and the Southern Railroad wound their ways through the valleys into the southland.

Before long the farmers were shipping their crops to Baltimore by freight trains instead of by slow wagons on the roadways. And back over the railroads went the manufactured goods of the city: the machines and tools, the clothing, and other things that the farmers could not make for themselves.

In and out of Baltimore harbor sailed larger and faster ships. More people came there to settle. Many years passed. The city grew and grew. Today it is a center of trade and industry, of government and schools and colleges, of libraries and hospitals.

Industrial Cities Also Grew at Lake and River Ports

Not only did seaports grow at the fine harbors along the coast. As you know, ports grew up on the rivers as well. At the point where the Allegheny and Monon-

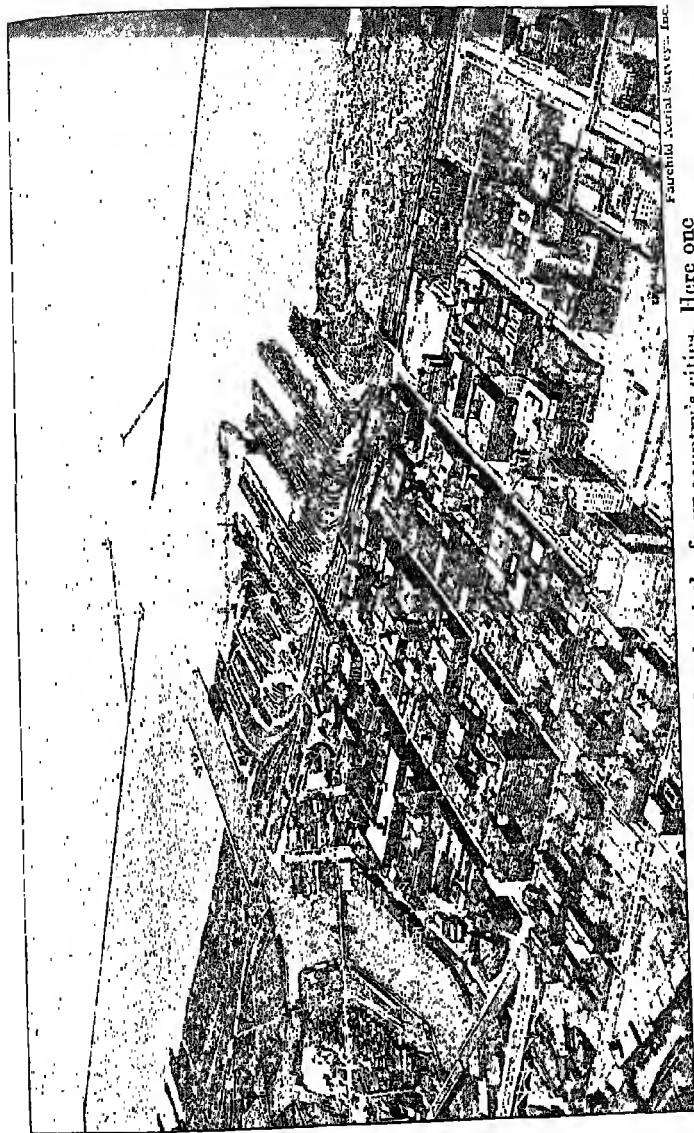
gahela rivers join to form the Ohio is the coal and steel and trading city of Pittsburgh. On the Mississippi River grew the large cities of Minneapolis, St. Paul, and St. Louis, and many smaller ones. On the Ohio are Cincinnati, Louisville, and other manufacturing and business cities.

Each of the Great Lakes has its cities also. On Lake Erie are Buffalo and Cleveland. On the river between Lakes Huron and Erie there is Detroit, on Lake Michigan are Chicago and Milwaukee, and on Lake Superior is Duluth.

Industrial Communities Grew for Other Reasons

But you also learned in *Communities of Men* that cities which had good harbors were not the only ones which had a good growth. Such cities as Trenton, New Jersey, on the Delaware, and Richmond, Virginia, on the James River, were begun at waterfalls, which boats could not pass (see map on page 139). Others grew at places where the water falling over high rocks could turn water wheels and make power to run machines and factories. Along the Merrimack and other rivers in New England many cotton-manufacturing mills were built. People came there to work, and towns sprang up around the mills.

Still other cities grew because there were rich natural resources close by. In eastern Pennsylvania people



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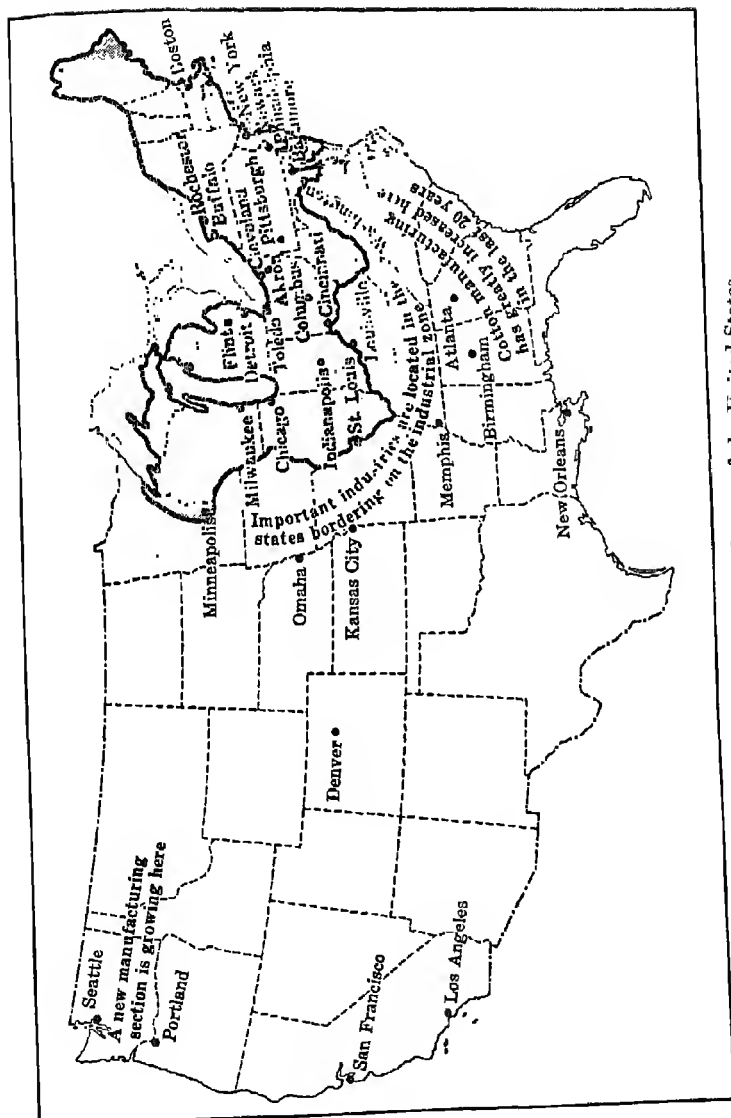
FIG. 131. Cleveland is the sixth of our country's cities. Here one can see all the things necessary for modern living

found huge beds of hard coal, and Wilkes-Barre and Scranton and other middle-sized cities grew up near them. In West Virginia and western Pennsylvania other communities grew up near the soft-coal fields, Duluth and Hibbing in Minnesota, and Superior in Wisconsin, became cities chiefly because of the enormous fields of iron ore that were found in those regions.

Most of the Manufacturing Centered in the Industrial Region

So it was that from the Atlantic to the Pacific, people built factories and power stations, railroads and stores and offices. So it was that industrial cities and towns rose all over the country. There were some, like Tulsa, Oklahoma, which grew because of oil. There were boom cities, like Miami, Florida, which sprang up because people wanted to get rich quick by buying and selling land. Still others, like Phoenix, Arizona, grew even on the desert because dams were built on the near-by rivers, and fruit farms were started on the irrigated lands. Thus, for one reason or another, cities and towns sprang up all over the country, and almost every region had at least a few.

But most of the manufacturing was done in the northeastern part of our country, which we now call the chief industrial region. We cannot say exactly where it begins or ends, because there are cities and



MAP 20. The chief industrial zone of the United States

towns outside of it which do much manufacturing. But we shall be entirely correct in saying that it lies generally north of the Ohio River and extends from slightly west of the Mississippi to the Atlantic Ocean. Thus, as shown on map 20, it includes all or parts of the following states :

Minnesota	Indiana	Pennsylvania	Maryland
Wisconsin	Michigan	New York	West Virginia
Illinois	Ohio	New Jersey	Delaware
The New England States			

Pictures of Life in the Industrial Region

In order that you may see the wide variety of ways by which people make a living in this industrial region, we have put the pictures of figures 132 to 139 in this book.

1. *New England*

Figures 132 to 135 picture life in New England. As you know, New England was the first industrial region. Even in colonial times every village that could boast a brook had its mill wheel, and the craft of spinning yarn and weaving cloth had been established among the New England people. When the new factories sprang up along the swift New England rivers, about 100 years ago, many of the New England farmers and their children found work in them. Cotton was being grown by the Southern planters and shipped to

the New England mills to be spun into yarn and woven into cloth. Later sheep were raised on the Western plains, and the wool was also shipped to the New England mills.

Other industries began to appear in the towns and cities of New England. After 1825 the manufacturing of machines also increased. The making of shoes and textiles drew more farmers away from the soil. Shops were opened for the making of tools and implements. The New Englander became known more and more as a skilled mechanic and as a merchant. Little by little many of the New England farms were deserted. In the later 1800's fields that had once been cleared of trees and underbrush became overgrown. Many of the neat stone walls tumbled down. Throughout many square miles of northern New England the land again became almost as wild as when the first settlers saw it.

But those people who remained on the farms learned slowly how to raise certain crops that would grow on the thin, gravelly soil. The pictures of figure 132 to 134 show the kinds of agriculture by which these New England farmers got a living. In the Connecticut River valley both soil and climate were found to be favorable for the raising of *tobacco*. In most of the New England states, especially Maine, farmers *specialized* in the raising of high-grade *potatoes*. This means that they raised more potatoes than any other crop. Large crops of



FIG. 132. A tobacco field in Connecticut



FIG. 133. Fine crops of potatoes grow in Maine

hay were produced, and the pasture lands made possible the raising of herds of fine cattle. Then the New England states became an excellent place for *dairying*. As good roads and railroads came, milk, butter, cheese, and other dairy products were shipped to the markets of the growing towns and cities.

Most of the people, however, were to be found in textile mills and other manufacturing plants and in the trades. Forty years ago this was said of Connecticut: "So great is the town population, so meager is agriculture, that it is estimated Connecticut produces each year enough mutton to meet the needs of her people for only one day, and enough beef to meet their needs for only eight days." All the rest of the meat and nearly all the wheat, corn, and other grains had to be shipped in from other sections, chiefly from the central agricultural belts and the cities of the Western industrial section, which made these things into bacon, flour, and other foods.

Summing up, then, we can say that New England is made up of six small states, with a population of about 8,000,000. About 80 out of every 100 people live in towns and cities, in most of which some kind of manufacturing is carried on. It has one large ocean port, Boston, and several smaller ones. Its agriculture consists of dairying and the raising of fruit, potatoes and other vegetables, and tobacco. Although the

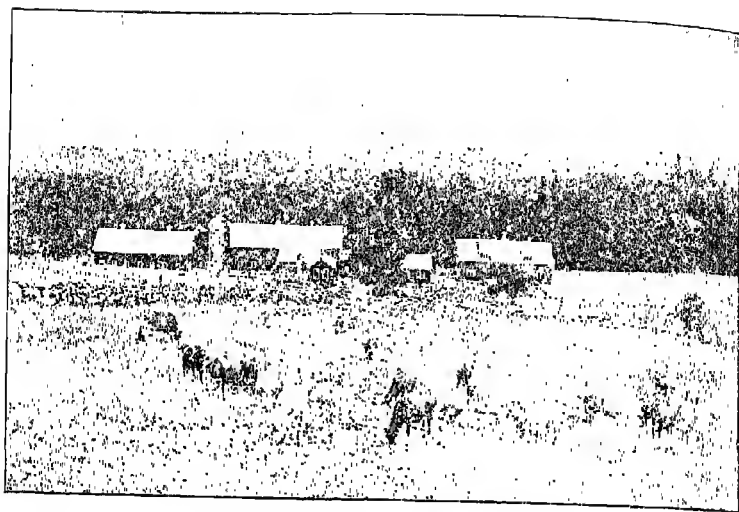


FIG. 134. A dairy farm in Massachusetts

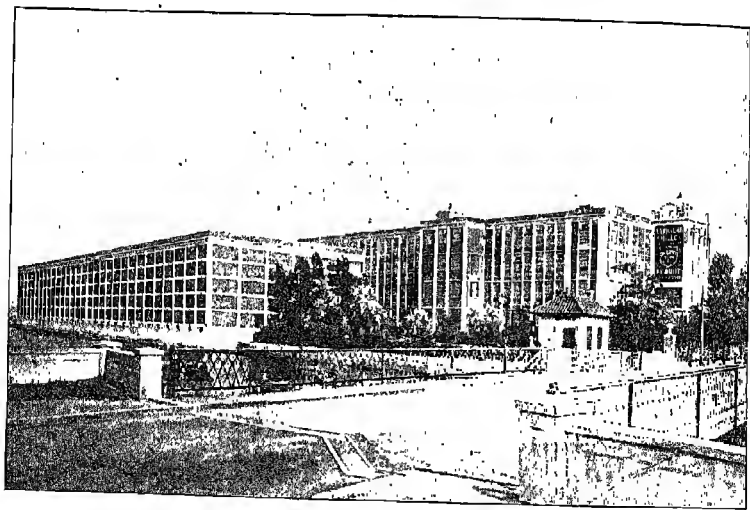


FIG. 135. One of the New England mills where cotton is manufactured

forests have largely been cut down, some lumbering is still done in the northern districts.

New England is a part of the chief industrial region, depending upon the rest of the country both for much of its food and for fuel to run its factories.

2. The Great Lakes and Central Coast States of the Chief Industrial Region

The pictures of figures 136 to 139 show ways that people make a living in the second part of the chief industrial region. This includes the states north of the Ohio River and east of the Mississippi together with West Virginia. All these states except West Virginia touch either one or more of the Great Lakes, as Michigan, Illinois, and Wisconsin; or the seacoast, as New Jersey and Delaware. Pennsylvania and New York touch both the Great Lakes and the seacoast.

In this book we have spoken many times of the way in which Ohio, Indiana, Illinois, and Michigan were settled between 1800 and 1850. After 1850 they developed not only into a large farming region but also into a manufacturing section. How well this is shown in the pictures! The upper picture on page 452 shows an Ohio farm which is like very many in that state, with fairly level land planted with different crops. You can see from figure 144 that Illinois, Indiana, and western Ohio make up nearly half of the huge corn belt

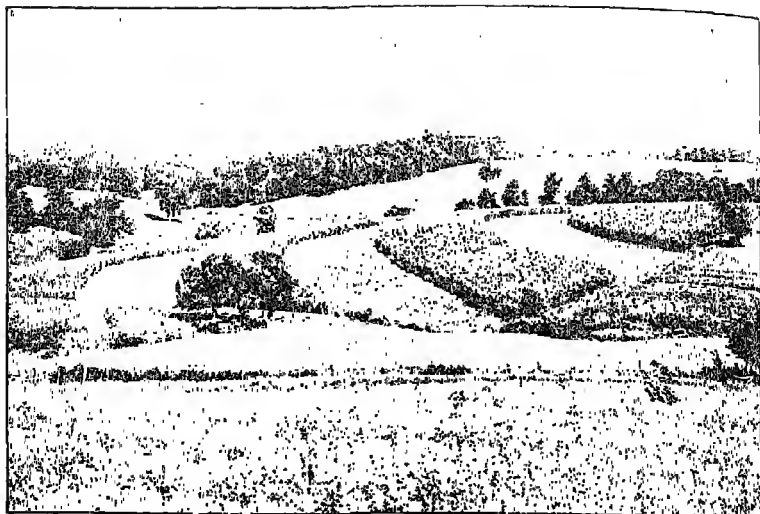


FIG. 136. Scene in the Ohio farm lands

Ewing Galloway

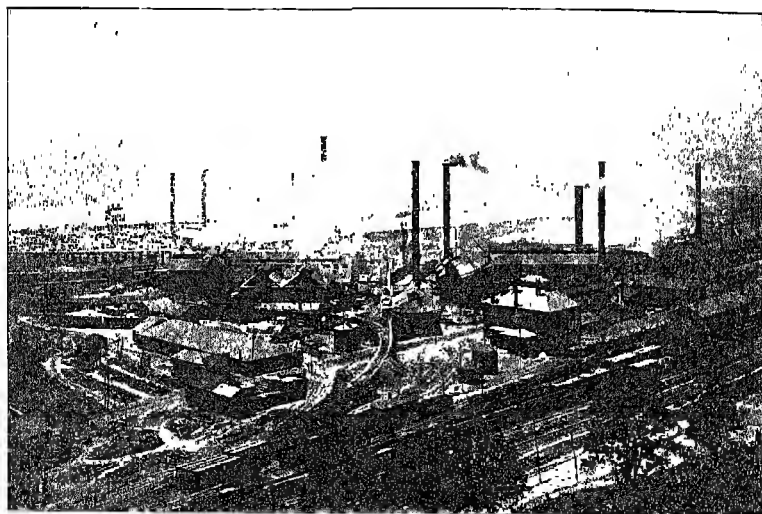


FIG. 137. A busy steel mill

of the United States. In Chapter XXVI we shall discuss farming in these states.

The other pictures of figures 137 to 139 remind us of the many industries of this section. They tell us of the steel mills in the Pennsylvania and Ohio district and in the northern Indiana and Illinois district and of the great railroad yards that have been built in Pittsburgh, Cleveland, Buffalo, Detroit, and Chicago. In Chicago are the world's biggest stockyards and meat-packing industries, and in Minneapolis is the flour-manufacturing industry, which made that city grow into one of the largest cities in our country. All these things help us to remember that special ways of machine manufacturing and mechanical trades made these cities important industrial communities of our country.

Summing Up

Why the Northeastern Section Became the Chief Industrial Region

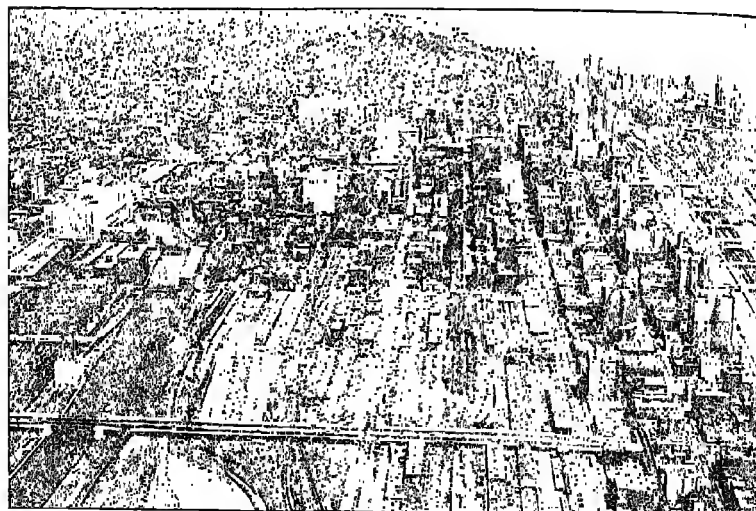
In many ways, then, the chief industrial region has come to be the most important part of our whole country. Within this area today live more than half of all the people of the United States. Here is done more than three fourths of all the manufacturing. Here are nine tenths of the largest cities.

Why has this region become so important? There are many reasons, of course, and as we study the his-



Courtesy of Western-Creek Co.

FIG. 138. A flour mill, Minnesota. These men are packing the flour into sacks



© Chicago Aerial Survey Co.

FIG. 139. One of the great railroad terminals in Chicago

tory of our country in other books we shall learn more about them. But from what we have already learned we should remember these:

First, the region has enough fuel and power to run engines and machines. There is excellent water power in the rivers, and extending from Pennsylvania and West Virginia to Illinois are the most extensive coal fields in the United States.

Second, the region has a valuable store of metals. In Minnesota, for instance, are the largest deposits of iron ore now being worked in the whole world.

Third, the region has warm summers and cold winters, the kind of climate in which people can work well. It has a growing season long enough for the growth of most food crops.

Fourth, the region has many ocean, lake, and river harbors. For that reason the largest port communities have grown up there.

Fifth, the Great Lakes provide cheap water transportation for the entire region.

Sixth, the region has more railroads, canals, and good roads than any other part of the country. This makes the carrying of raw materials and manufactured goods between communities cheap and quick.

Seventh, the region is the country's best market. Because of quick and cheap transportation and a plentiful supply of fuels and metals, many business men

have moved into this region to build factories and stores and offices. To do the work, large numbers of people have gone there to live. These people must be fed and clothed and housed, transported and entertained. Thus the chief industrial region has become the country's best market for all kinds of goods.

Do you see now why the northeastern part of our country is the chief industrial region?

Books You Would Like To Read

See the titles at the end of Chapter XXXI.

CHAPTER XXV

II. The South

The Cotton Kingdom

ANOTHER IMPORTANT region of our country that we have seen growing is the South. Map 19, page 418, shows what it includes today. As its name suggests, it lies wholly in the southeastern part of the United States, extending from the Ohio River to the Gulf of Mexico and from the Atlantic Ocean to Texas and Oklahoma. Thus it includes all or a part of

West Virginia	North Carolina	Louisiana
Virginia	South Carolina	Texas
Kentucky	Georgia	Oklahoma
Tennessee	Florida	Alabama
Missouri	Arkansas	Mississippi

Notice the black line drawn on the white area called the South. This line marks the boundary of the cotton belt of our country. Within this area the climate and the soil are just right for growing cotton. There are,

First, a long growing season

Second, plenty of rainfall in the spring and summer months

Third, many clear, sunny days

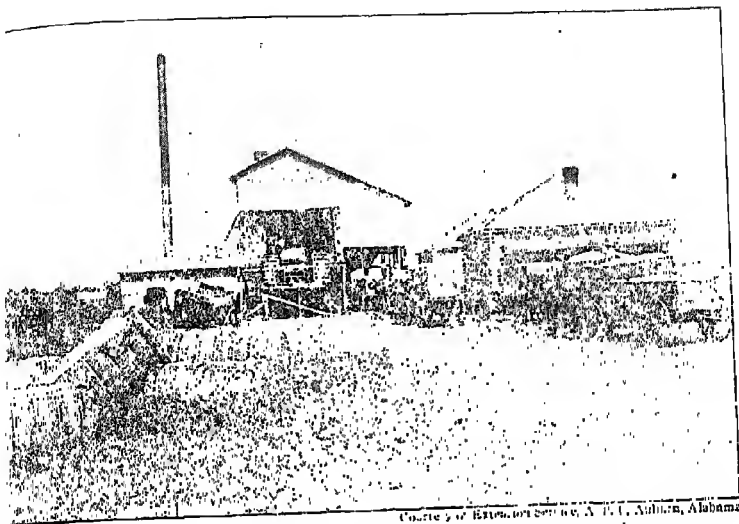
Fourth, a rich well-drained soil

For over a century cotton has been "king" in the South. Today, much as in years gone by, ships go out of Galveston, New Orleans, Savannah, and other Southern ports, loaded with cotton for the manufacturing cities of England and other countries.

Other Industries of the South

But other pictures in this book remind us that there are other industries in the South besides that of cotton growing. One of these is the manufacturing of cotton yarn and cloth. When the Civil War was over (1865), people in the South began again to build their homes. They also began to look about for ways to earn a living. Then they discovered that they, as well as the people of New England, could manufacture yarn and cloth. So instead of shipping cotton all the way to New England, as had been done for nearly 100 years, they began to build mills for the making of cloth in North and South Carolina, Georgia, Mississippi, and Alabama. These mills were built close to the fields where the cotton was being raised.

So many spinning and weaving mills were built that by 1920 South Carolina was the second cotton-spinning state in the Union, and North Carolina was the third. Although Massachusetts still leads in the amount of yarn and cloth made, each year cotton mills are closing their doors in New England. In fact, some of the New



Courtesy of Extension Service, A. B. L., Auburn, Alabama

FIG. 140. A cotton gin in Alabama. See how the cotton is bound into bales

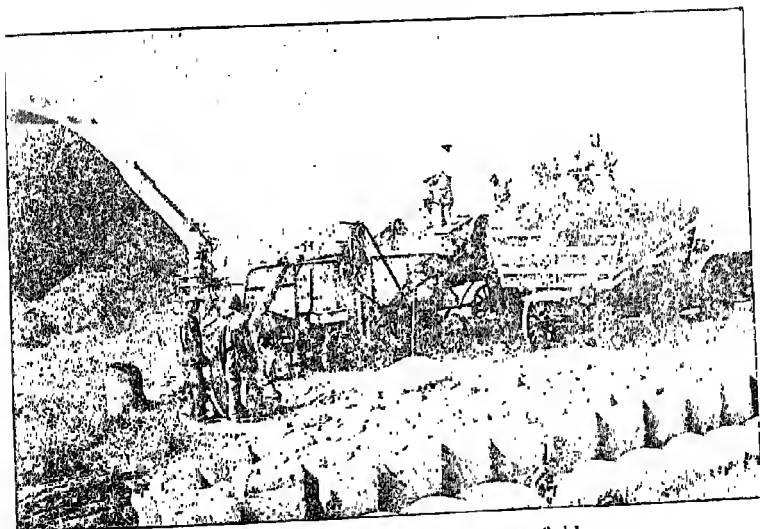


FIG. 141. Threshing rice in a Texas field

England manufacturing cities are becoming smaller while those of the South are growing larger.

In the meantime certain natural resources were found in the South. In Tennessee and Alabama rich beds of coal and iron were discovered. Large iron and steel industries have been developed near these, and towns and cities are growing rapidly. Machine industries are also springing up. The building trades are bringing workers. Roads and railroads are being improved. Each year parts of this region begin to resemble the industrial region north of the Ohio River.

To the southwest still other changes are coming. In Oklahoma and Texas lie some of the biggest oil fields of the United States. Oil, as you know, is the magic power that runs our motors today. Until about 25 years ago most of our oil came from the Pennsylvania part of the industrial region. Then people discovered oil in Oklahoma and Texas, and thousands of oil wells were drilled. Today more than half of all the oil produced in our country comes from the South.

Although the larger part of the South continues to plant cotton, there are other kinds of farming. Three crops in the Far South — rice, sugar, and citrus fruits — are most important. Notice the Gulf-coast region, in figure 144, marked "humid subtropical crops belt." On the Texas and Louisiana coast of the Gulf of Mexico is a strip of swampy land several hundred miles long.

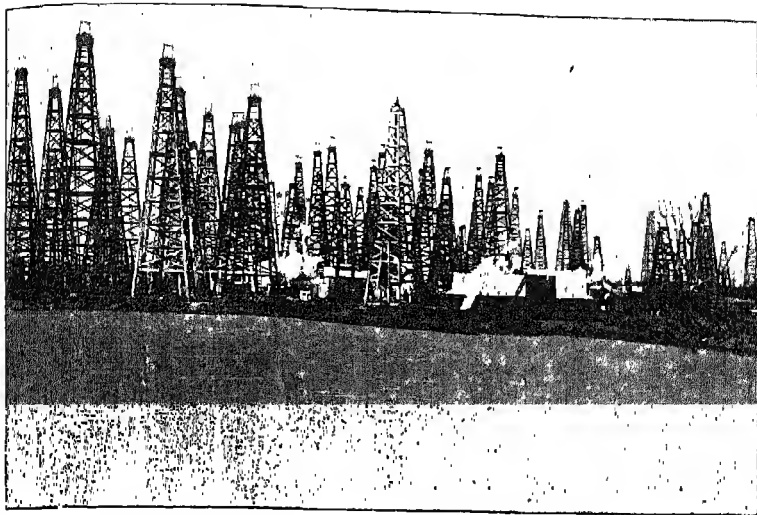
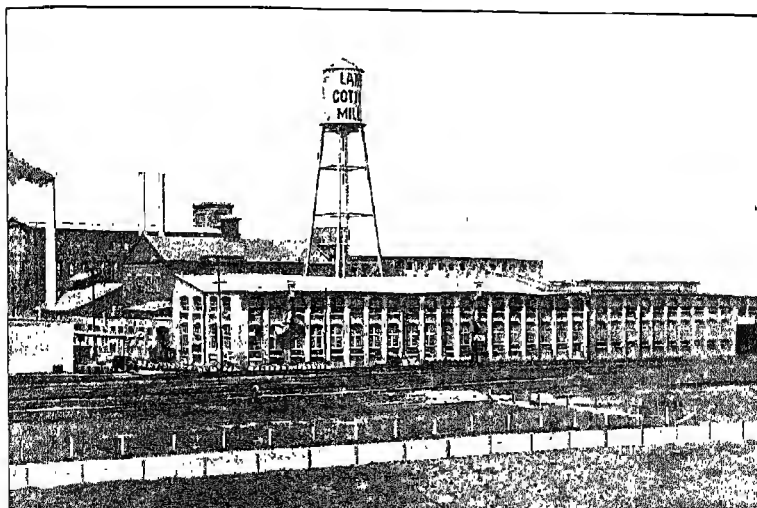


FIG. 142. "A forest of oil derricks" in southern Texas



Ewing Galloway

FIG. 143. How is this Louisiana cotton mill like that in figure 135?

It is a low, flat land with just the hot, moist climate and rich soil needed for rice. Here one of the largest rice crops in the country is grown.

On the lowlands of the lower delta of the Mississippi River are large fields of sugar cane. Here, as in Texas, the climate is very hot, the land is level and swampy, and the yearly rainfall is over 60 inches.

In Florida is one of the two great citrus-fruit regions of the United States.

What Kind of Region Is the South?

First. The South covers the southeastern quarter of our country. Over most of its land from 40 to 60 inches of rain falls each year. The temperature is high during two thirds of the year. This hot, moist climate gives most of the South a growing season each year of more than 200 days in length.

Second. The soil, the temperature, and the rainfall over most of the region are favorable for the growing of cotton. The world's largest supply is raised there. The South has long been called "the cotton kingdom."

Third. Coal and iron have been discovered in parts of the South, and many different industries have grown up there. Factories for the spinning of cotton yarn and the weaving of cloth have been built in many parts of the South, and it is becoming one of the most important manufacturing regions of the country.

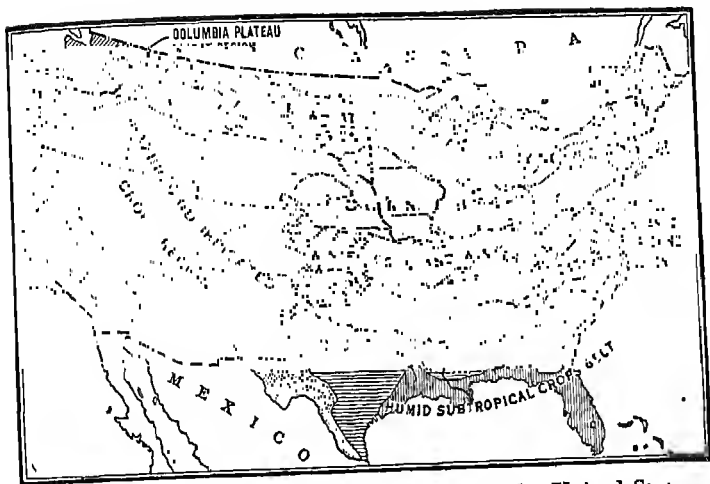


FIG. 144. The chief agricultural regions of the United States

Fourth. In the Gulf-coast region the rainfall is very heavy and the growing season is more than 240 days in length. Here special warm-weather crops, such as oranges, grapefruit, lemons, rice, and sugar cane, can be grown.

Fifth. In Texas and Oklahoma is produced more than half the oil of the entire country.

This, then, is the "new South," one of the largest and most important regions of our country.

Books You Would Like To Read

See the titles at the end of Chapter XXXI.

CHAPTER XXVI

III. The Corn, Wheat, and Meat Belt of the Central Plain

THE CHIEF corn and wheat and meat belt of the United States today forms the larger part of the Great Central Plain, which you read about in Chapter VIII. Let us see how it happened that that great natural region contains the garden spot of our country.

First, it is a level plain more than 1000 miles long and 1000 miles wide, lying between the Appalachians and the Rocky Mountains. It covers all or a part of each of the following states: North and South Dakota, Minnesota, Iowa, Nebraska, Kansas, Missouri, Illinois, Indiana, and Ohio. This means that in it are some of the same states that belong to the chief industrial region. On map 20 (page 445) and on figure 144 notice that Illinois, Indiana, and Ohio are important states in both the chief industrial region and the corn and wheat belt. Large farms as well as manufacturing cities can be seen in this part of the Great Central Plain.

Second, most of the area is covered with fertile soil. We now see that the United States, like Russia and other countries, has a Black Earth region.

Third, the region has the kind of climate that makes one want to do things, a climate that is cold in winter and very hot in summer. It has a yearly rainfall of from 20 to 40 inches. Map 13, page 189, shows us that much of the region has a long growing season.

Let us look closely and see what this garden spot of our country produces.

The First Farm Product: Corn

Corn is a fairly new farm product. It was not known in Europe until the early explorers of America found the Indians growing it. They took it back with them, and soon afterward European farmers began to plant it on their farms. When the white colonists came to North America in the 1600's, the Indians taught them how to raise corn. In all the Eastern colonies small amounts of it were raised, only enough for corn bread and other family uses on the farm or in the neighboring towns. As the years passed, the colonists learned how to grow it even better than their Indian teachers had done.

As the settlers began to move into the Ohio and Mississippi valleys in the early 1800's, they found that the plain, with its large amount of rainfall and its long growing season, was a favorable place for growing corn. During the early and later periods of its growth corn grows well with a small supply of moisture; but

in the middle season, when the ears are swelling, plenty of water is necessary. In our corn belt this comes from the end of June to early August. During this time the rainfall is usually about ten inches.

Corn grows best where there is a high summer temperature and a growing season in the neighborhood of 145 days. That is true of the corn belt. So three things — the right kind of soil, the right amount of rainfall, and enough warm, sunny days — have made our great corn belt what it is today.

More and more the farmers of eastern Ohio, Indiana, Illinois, and Iowa made the raising of corn one of their chief tasks. Farm machines were invented, and scientists studied better ways of preparing the soil and making it richer. Each year the farmers of the corn belt secured larger and larger crops from their fields.

Today the United States produces 70 per cent of the world's corn, most of it in the region we call the corn belt.

The Second Farm Product: Meat

Why should corn be our one biggest crop, and why should we produce nearly three fourths of the world's supply of corn? It is not because we eat large quantities of it, for we do not. Only one tenth of our giant corn crop is eaten by our people. Why, then, should it be our biggest crop?

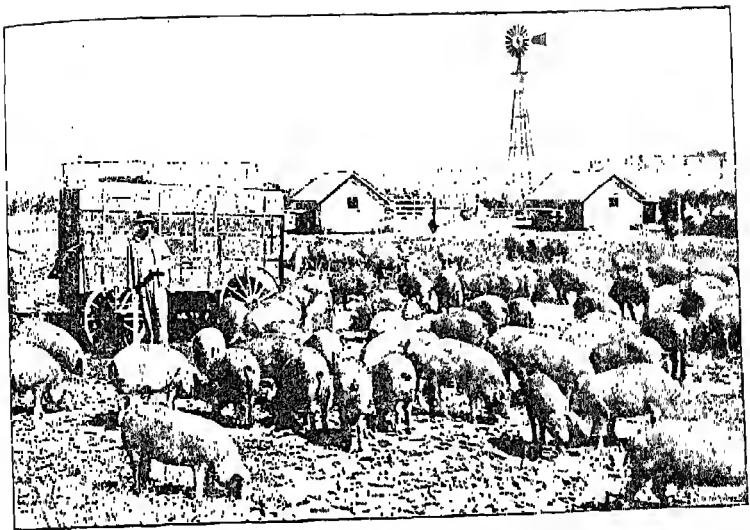


FIG. 145. Drove of hogs are found in the corn belt

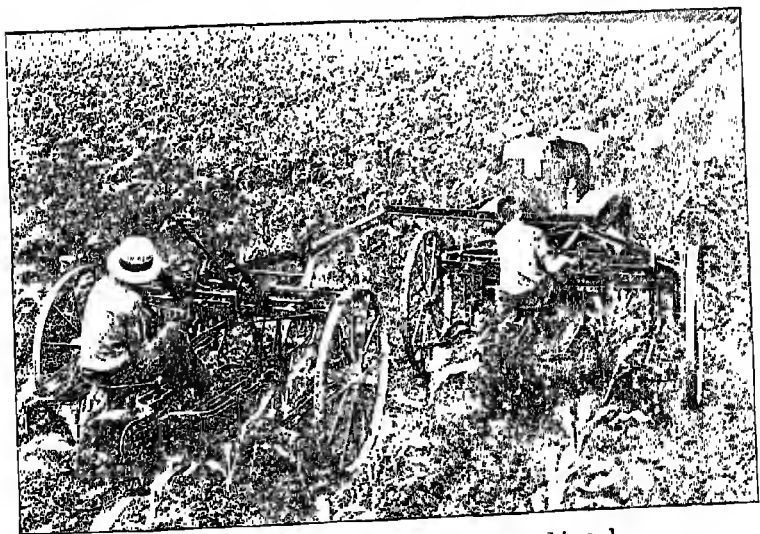


FIG. 146. How the great cornfields are cultivated

It is because of meat! The most important meat-producing region of the United States is the corn belt. We Americans eat large quantities of meat, and we ship much of it to other countries. Americans eat more meat than the people of any other country: six times as much meat as the Italians, twice as much as the French, one and a half times as much as the English. If we should compare the amount for the Chinese, the people of India, and those of the Near East, it would be found that an American eats ten, twenty, even fifty times as much meat as a person in those regions.

"But," you are asking, "what has meat to do with raising corn?" The answer is that the animals which supply our meat and do our work live largely upon corn. The very center of the cattle industry is in the state of Iowa, and Iowa produces more corn than any other state. Almost nine tenths of the corn is fed to cattle, hogs, sheep, and poultry.

So we see that the corn belt is also the meat-raising region of our country. Within it most of our animals are killed and prepared for eating. Before the days of railroads meat had to be eaten near the place where the animals were raised, because it would spoil if sent long distances. There was little shipping of meat from one region to another and almost none from one country to another. In places where few people lived ani-

imals were often raised for their hides and for tallow to make candles and soap, but the meat was wasted.

After 1825 came the swift railroad trains and steamships which could carry meat long distances in a short time. Then, after 1875, refrigerator cars and refrigerator ships were invented. In these meat would remain fresh for a long time. It was then possible to raise animals in one region, prepare the meats, and ship them to distant parts of the world. So we find that the largest meat-packing plants are in Chicago, Kansas City, Omaha, and other cities in the corn belt.

But we must not think of the corn belt as a region in which the farmers are producing corn only. They are also raising large amounts of oats, wheat, and other crops. And all around them in these central agricultural states are hundreds of small towns and cities in which there is much manufacturing and trade.

The Third Farm Product: Wheat

One third of all American farmers grow wheat, most of it on the Great Central Plain. Wheat is usually our fourth most important agricultural crop — corn, cotton, and hay being in most years first, second, and third. The city people of the chief industrial region, the cotton-growers of the South, the cattle-raisers, miners, and fruit-growers of the Western states, all depend upon bread made from wheat flour.

Most of the wheat is raised in two regions. On figure 144 these stand out clearly: the spring-wheat section in North Dakota and part of South Dakota, and the winter-wheat section in the south-central states, from Kansas southward and eastward.

Why should there be two parts to the wheat belt, and why should they be so distant from each other? Because our farmers have learned how to grow two kinds of wheat seed: a winter-wheat seed and a spring-wheat seed. The winter-wheat seed is planted in the autumn and comes up before winter sets in. During the mild winter it grows very little. Light snows come and protect it from the cold. In the warmth of spring it begins to grow again, and in the early summer the crop ripens and is harvested. Winter wheat, therefore, is a crop that ripens slowly. It needs a long growing season, with much moisture and heat. These are found in Kansas, Missouri, Kentucky, and the other states included in this region on figure 144.

The spring-wheat seed, on the other hand, grows very quickly. It can be planted in the spring, and grows so rapidly that it is ready to harvest by late summer. The cold regions of Minnesota and North and South Dakota, with their favorable soil, have proved to be just right for the raising of spring wheat.

The same is true of the region just to the north of the Dakotas, in Canada. Hundreds of thousands of

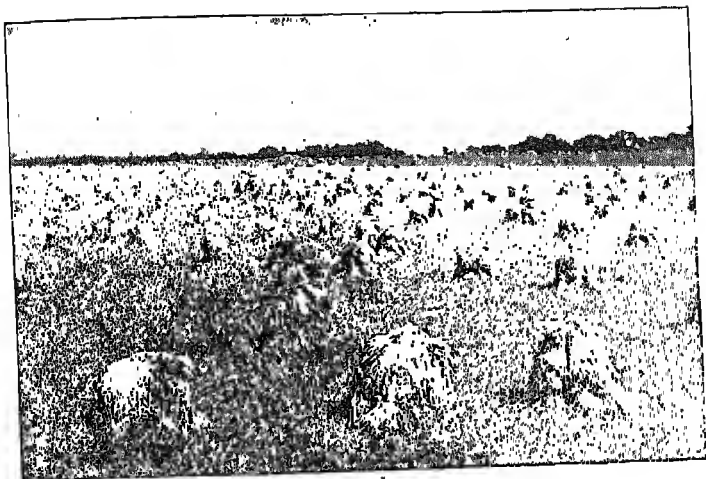


FIG. 147. A wheat field after the harvest

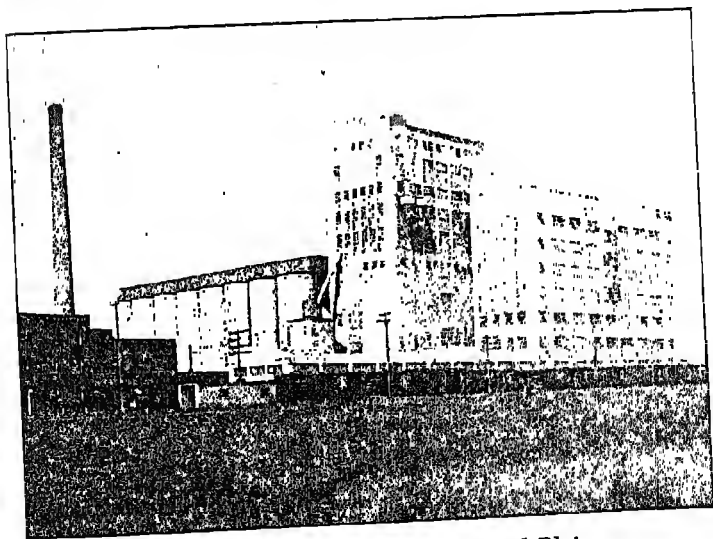


FIG. 148. A flour mill in the Central Plains

square miles of Canadian plains are planted each year in wheat. This whole farming, or agricultural, section from western Minnesota to Montana, including the Canadian fields, is now one of the greatest wheat-growing regions in the world. Millions of bushels of wheat are sent each year to Duluth and the Canadian lake ports to be shipped by steamer on the Great Lakes to the Atlantic coast. From there they are sent to Great Britain, Italy, France, Belgium, the Netherlands, Germany, and other countries. Of course much of this spring wheat is made into flour in the mills of Minnesota and shipped to the cities of our own country.

You can see, then, why the corn, wheat, and meat belt is in the region of the Great Central Plain.

Books You Would Like To Read

See the titles at the end of Chapter XXXI.

CHAPTER XXVII

IV. The Great Grazing Plains

YOU KNOW the fourth region of our country from the stories in Chapter XIX. Let us review what we learned and see why this section has become the great grazing plains.

First, as map 19, page 418, shows you, the region extends from Canada to Mexico, just east of the Rocky Mountains. From north to south it is about 1200 miles long; from east to west it has different widths — from 200 miles in Texas to a width of more than 500 miles in Montana. Thus the grazing plains cover a large territory, including parts of the following ten states:

Montana	Colorado	Oklahoma
North Dakota	Nebraska	New Mexico
South Dakota	Kansas	Texas
Wyoming		

The western parts of Montana, Wyoming, Colorado, New Mexico, and Texas lie in the Rocky Mountain region; the eastern parts of the other states are in the Great Central Plain.

Second, these plains are high plains. They slope gently from 2000 feet above sea level in the eastern

part to 5000 feet on the western border. Find these plains on map 3, pages 10-11, and on map 4, pages 14-15. If you remember that the Appalachian Mountains are from 2000 to 6000 feet high, you can understand that parts of the grazing plains are nearly as high as the tops of the eastern mountains.

Third, we have already learned that this region is very dry. Over most of it only from 10 to 20 inches of rain falls each year. The winds come largely from the west and leave nearly all their moisture on the ranges of mountains west of the high plains. By the time they pass over the plains they have very little moisture left.

We also know that the temperature in the northern part of the region changes from very hot to very cold. There are several weeks of very hot weather in summer, changing warm and cool periods in spring and autumn, and a long stretch of very cold weather in winter. Parts of Texas and New Mexico, however, are warmer than the north. The temperature is higher in winter, seldom going much below freezing, and in summer there are months of very hot weather.

Fourth, as you can see, the rainfall on the high plains is too little for the growth of most crops. The farmers who settled there 70 and more years ago did not succeed in raising corn and wheat and other grains. But when they saw how well grass grew, they began to

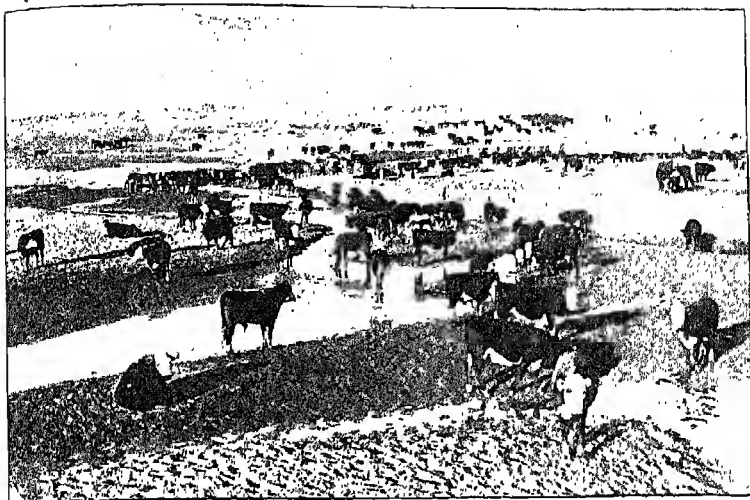
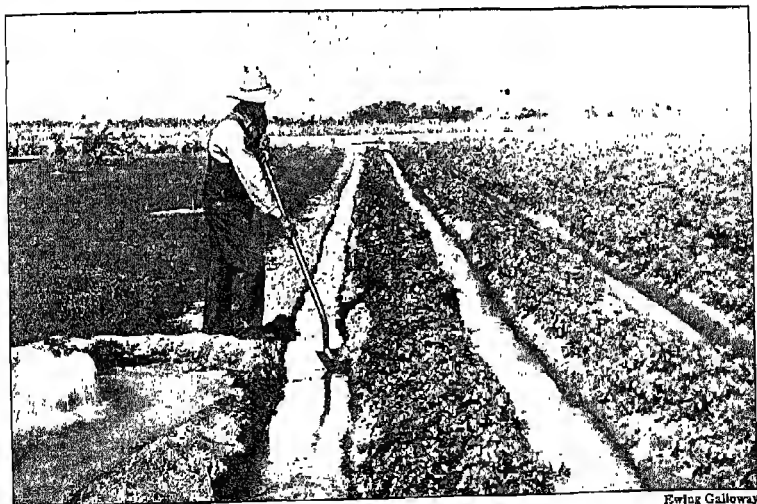


FIG. 149. Cattle gathering around a water hole



Ewing Galloway

FIG. 150. By means of irrigation this man is growing fine celery

raise cattle. After 1870 these high, dry plains became the most important cattle-raising region. Since that time people have called the territory the great grazing plains. In the drier parts of the high plains, however, more sheep than cattle are raised.

Here and there in the high-plains region are acres and acres of well-cared-for farms with fine orchards and vegetable gardens and large sugar-beet fields. Perhaps you are thinking, "How can that be on this dry plain?"

The answer is irrigation. In the western mountains, on the edge of the high plains, the people have built dams across the rivers. These hold back the water which rushes down the valleys in the spring when the snow has melted on the mountains. Lakes are formed behind the dams, and the water is stored there until the spring and hot summer months. Then, when the plants are growing in the fields on the plains below, water is allowed to flow through pipes and canals and from one ditch to another over the thirsty soil. Figure 150 shows how the water is led through the ditches.

Because of this way of storing water during the autumn and winter and letting it out upon the soil when it is needed in spring and summer, the dry soil of the high plains is in many places being turned into rich farming land. Parts of Colorado and lands near

by have become some of the best places in the country to raise sugar beets.

We shall bear in mind, then, that although the great grazing plains are used largely for raising cattle, thousands of sheep are raised there. Besides, there are large areas of well-irrigated farm land here and there.

Books You Would Like To Read

See the titles at the end of Chapter XXXI.

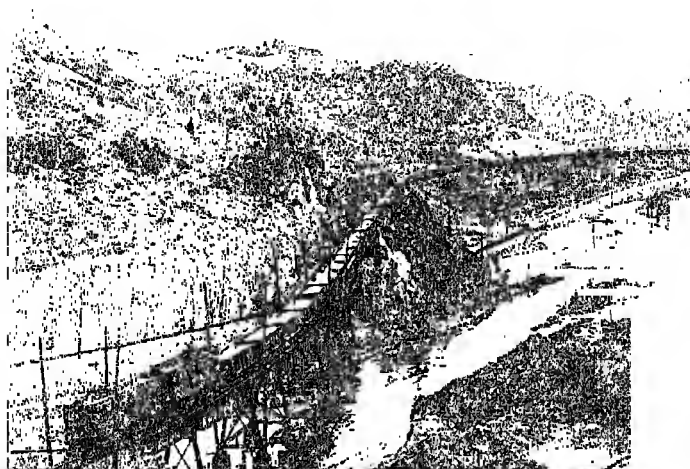


FIG. 151. A train of copper ore from a Montana mine

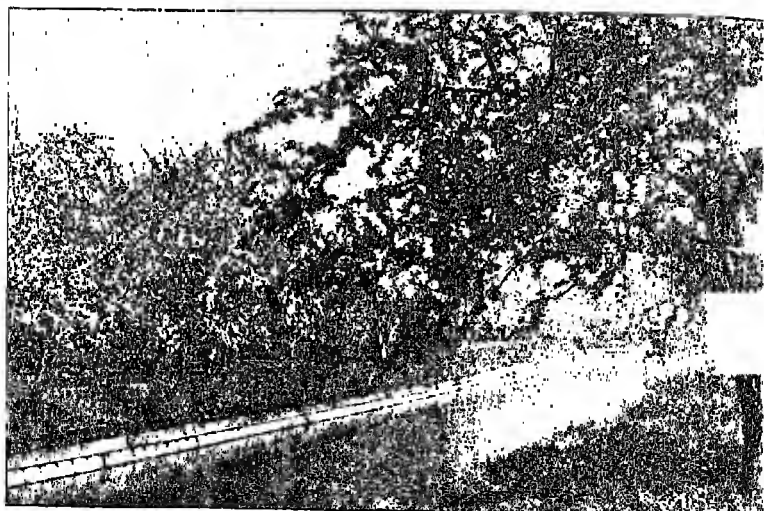


FIG. 152. An apple orchard in Washington. See the irrigation canal

Ewing Galloway

CHAPTER XXVIII

V. The Mountain and Plateau Region

MAP 19, page 418, and the pictures of figures 151 to 154 remind us that the mountain and plateau region is in some ways very different from any of the others we have studied. Let us sum up quickly what we learned about this region in Chapter XX.

First, it is a huge region, 1000 miles wide and 1500 miles long, covering part or all of each of the following eleven states:

Washington	Montana	New Mexico
Oregon	Nevada	Arizona
Wyoming	Utah	California
Idaho	Colorado	

Second, it is a high plateau from 5000 to 8000 feet above sea level, bordered on the east and west by mountain ranges which rise to a height of 10,000 feet or more.

Third, it is the driest large region in our country. The rainfall in most places is less than 20 inches a year and in some places it is less than 5 inches. Vast areas are desert land where plants do not grow and where animals and people find it difficult to live. Parts

of this region are very hot in summer and very cold in winter.

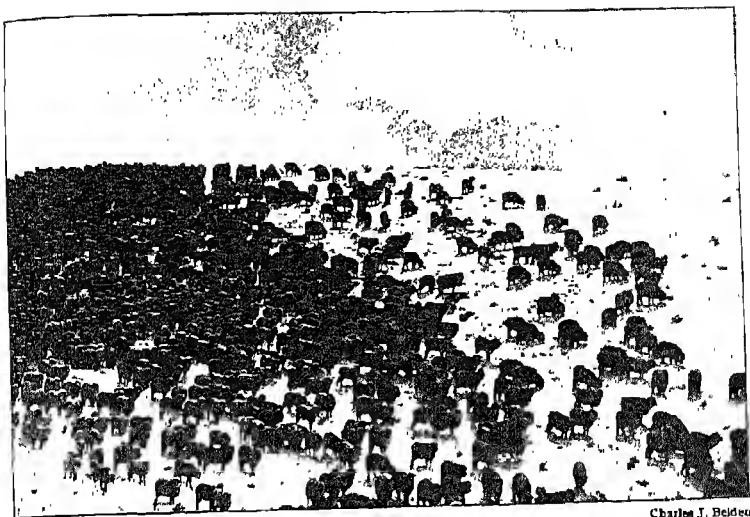
Fourth, in spite of all these things people do live in the region, and in some places they have settled in large numbers. Why?

Chiefly because there are rich natural resources there which people want. In the mountains are valuable metals — gold and silver, copper and lead, and others. In a year not long ago this mountain region produced half of all the copper mined in the entire world.

Although in the mountains there is but little level land, in the fertile valleys between the ranges farming is carried on. In the northern part of the region these valleys have been planted with apple orchards. Apples were the first fruit sent from the United States to other countries, and for a long time they were grown only on the Atlantic coast; but now this northwest section ranks first in the production of apples.

In some places dams and ditches have been built, and water is brought down to irrigate the level lands which lie at the foot of the mountains. So here and there, even in the desert, green gardens, orchards, and comfortable farmhouses can be seen.

In the less fertile valleys and on the mountain slopes flocks of sheep graze. In New Mexico, Utah,



Charles J. Beiden

FIG. 153. Sheep on a Western plateau feeding through the snow



Ernie Galloway

FIG. 154. Lumbering is important in the Western mountains

eastern Oregon, and other states thousands of sheep are taken in the summer time to graze in the wide, open places above the tree line. There the animals crop the grass, eating it so closely that there is nothing left for other beasts. When the cool weather comes, the shepherds take their flocks down again into the lower lands for winter feeding. Most of this land belongs to the national government, and sheep-owners pay small amounts of money for the use of it.

On many of the mountain slopes and valleys grow thick forests. The Sierra Nevada and the Cascade Range are among the greatest lumbering regions of the world. There grow the tall, straight Douglas firs, sometimes 10 feet across and 100 feet or more in height, and the yellow pine. The United States is, indeed, the greatest lumber-producing country in the world, and at the present time the Rocky Mountain and Pacific-coast states produce more than a third of the yearly supply of the entire world. Much of this timbered land is owned by the United States government. It is protected by trained men called forest rangers, who day and night keep guard against fire; see that the shepherders keep in the right pastures, and have charge of the lumbering in the forests.

Looking to the future of this region, we can see how the increased use of electric power may help manufacturing in this region. Already the swift-flowing streams

The Mountain and Plateau Region 483

of the northern mountains have been dammed, and large water-power plants have been built by the railroad companies. There are in the mountains several hundred miles of railroad track over which trains are hauled by electric engines. Mining towns near by are using this power to run their mining machinery, to light buildings, and to transport goods.

This, then, is the mountain-plateau region of our country. Although there are fewer people here than in other parts of the United States, man is learning how to conquer natural difficulties and to produce from the earth the things he needs in order to live well.

Books You Would Like To Read

- * See the titles at the end of Chapter XXXI.



FIG. 155. A redwood forest in California

CHAPTER XXIX

VI. The Pacific-Coast Region

IN OUR imagination we have visited five of the important regions of our country. We come now to the long, narrow Pacific-coast region. This includes parts of Washington, Oregon, and California. Again we see examples of how rainfall, temperature, surface of the land, and natural resources help to determine where and how people live.

Notice, first, the climate of the Pacific-coast region. The northern half, which includes Washington, Oregon, and northern California, has a heavier rainfall than any other part of the United States except a small area on the northern border of the Gulf of Mexico. The warm west winds from the Pacific play over the northern section of this Pacific-coast region along the coast, leaving on much of it more than 60 inches of rainfall a year. The southern half, including southern California, has very little rainfall. Because of the dry air and the hot sunshine, southern California is an excellent place for the drying of fruit.

The valleys of the Pacific-coast region are important for fruit growing. Apples, peaches, and pears do

well in the northern half, and fruits that grow in warmer climates in the southern half. In California a large industry has developed for the canning and drying of prunes, apricots, grapes, pears, peaches, and other fruits. This state, indeed, dries more grapes to make raisins than do all other such regions of the world. As the traveler moves through southern California during the rainless, sunny summer months, he sees in many districts thousands of trays of fruits spread out to dry.

California cans nearly all the apricots and a large part of the peaches used in the United States. Not only fruits but also asparagus and other vegetables are raised here in large quantities and canned for use in Eastern cities and in other parts of the world.

From the stories you read in earlier books you have probably remembered that California is known for its mining. It was gold that drew men from the Eastern states to California in 1849 and the years immediately following. The hope for great riches to be scooped out of the California streams caused many men to risk the hard journey across the plateaus and over the mountains of the West. Fortunes were made in that region, but after a few years all the loose gold on the top had been claimed. Then, as in the mining of coal, miners dug for gold deep down under the surface of the earth.

In recent years there has been another discovery of mineral wealth in California. Oil — liquid gold!



FIG. 156. Fruit drying in trays

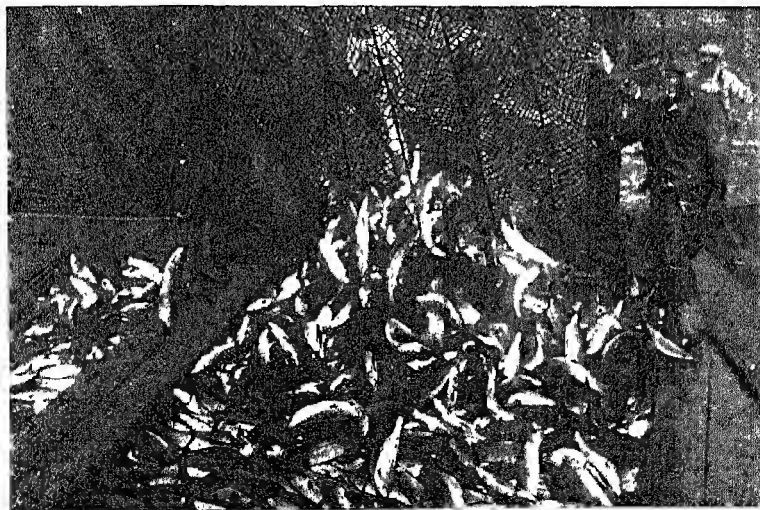


FIG. 157. Emptying a catch of salmon from the net

One of the country's big oil regions is located near Los Angeles, in southern California. In and near the cities of Los Angeles and Long Beach today there are many oil derricks. From the harbor oil steamers carry the fuel across the Pacific, and through the Panama Canal to the eastern coast of the United States or on to Europe.

Fishing and lumbering are also important industries in this Pacific-coast region. The west slopes of the mountains in the northern half are still well covered with timber. In California are the giant redwoods, which are among the largest and most valuable of trees (see figure 155). In the north, especially in Washington, are the fishing and fish-canning industries. In a recent year \$86,000,000 worth of canned fish, two thirds of which was salmon, was produced in the United States and Alaska. The fisheries and other industries of the northern Pacific-coast region, and those of Alaska connected with them, employ nearly 200,000 people.

The Pacific coast is therefore a region with a favorable climate and many rich natural resources. Farming and fruit growing, fishing and lumbering, take their place along with mining. .

Books You Would Like To Read

See the titles at the end of Chapter XXXI.

CHAPTER XXX

VII. The California-Arizona Desert

MAP 19, page 418, shows one small district in the plateau section between the western mountains that is worth considering as a region by itself. That is the California-Arizona desert. In this dry land rain hardly ever falls. Over the whole area the people can count on less than ten inches of rainfall in a year. But even there people have gone to live, and today crops have been grown on large areas by means of irrigation. Even more than 300 years ago the American Indians knew about irrigation. By carrying water to their fields they managed to raise small crops. In the 1600's and 1700's Spanish priests and missionaries came north from Mexico bringing with them new fruits — the fig, the olive, and the lemon — which could be raised in that climate if the soil could be watered. Here and there missions were started, and around them grew little centers of agriculture and handicraft. For 200 years their fruit farming has continued, and today the names "mission fig," "mission olive," "mission grape," remind us of our debt to those early missionaries of the desert.

In the 1870's the farmers in southern California and in parts of Arizona found that they could grow oranges, grapefruit, and other citrus fruits if they protected their orchards against the cool days that came now and then in winter. But the growth of farming in this region depended chiefly upon irrigation. The desert was a dry waste of fine brown soil covered with tall cactus and sagebrush plants. On this the sun beat down day after day. No passing rain cloud interrupted its steady heat.

As one travels through such a desert it is possible to see great distances because of the clearness of the air. The mountain ranges look as though they were painted; for their bare slopes, seen through the dancing light, are tinted pink, blue, and lavender.

But the soil itself contains rich plant foods and needs only water to produce excellent crops. So at certain places in this region our national government has built huge dams. There is, for example, the Roosevelt Dam in Arizona, which stores up the water of the Salt River and lets it flow as it is needed over a vast territory. The lands that are within the reach of this irrigation system have become very valuable, often selling for \$1000 and more an acre.

The soil of this section is rich in mineral products too. In the California desert the soil of Death Valley contains borax, which has proved to be useful in many

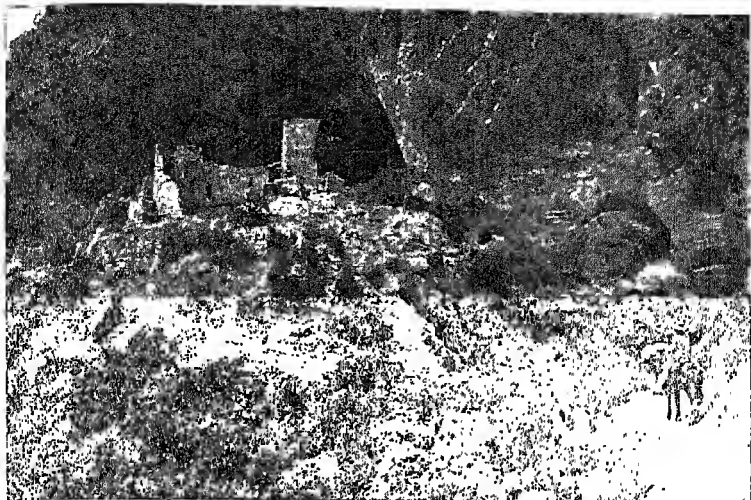
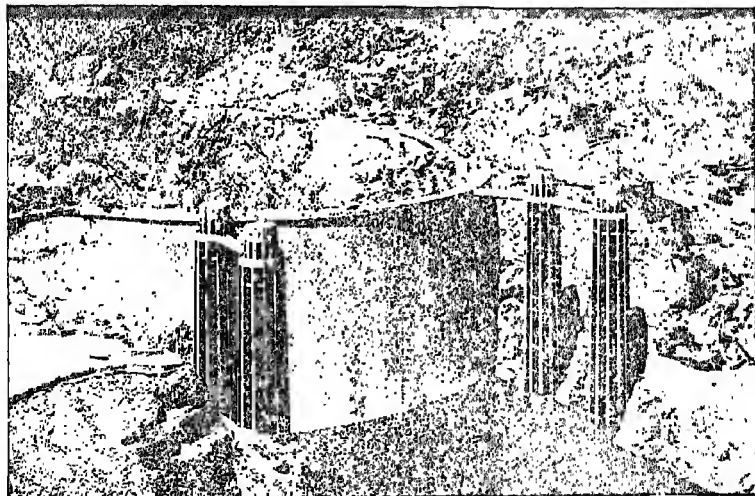


FIG. 158. Ancient ruins in the California-Arizona desert region



Philip D. Gendreau

FIG. 159. The water held back by this great dam will be used for irrigation

ways. In this region, even as far north as Nevada, nitrate of soda, an excellent fertilizer, is also found.

And then there are the rich mines. The copper mines of Arizona are among the biggest in the world; the gold and silver mines are also important. Each year millions of dollars' worth of these three minerals are taken out of the earth in this small region.

Summing Up the Differences between the Chief Regions

We have studied seven different regions of the United States. Although they are alike in some ways, they are different in many others. In closing our first study of them let us sum up these differences.

First, the differences in soil. In some sections, such as the northeastern states, which form New England, the soil is coarse, even rocky. Fruit and hay will grow there in great quantities, but wheat and corn will not. In other sections, as in the central plains from Ohio to Kansas, the soil is fertile loam on which can be raised fine crops of wheat and corn.

Second, the differences in climate. Some regions of our country have from 60 to 80 inches of rainfall each year. This is true in the states bordering the Gulf of Mexico and in the northwestern Pacific states. Other sections, like those in the California-Arizona desert, have less than 10 inches. The same difference is found

in temperature. In the Northern states the temperature changes from warm to cool and sometimes from very cold to very hot. In other states, as in the Far South, the temperature is almost always hot. In some regions snow falls nearly half the year; in others it never falls.

Third, the differences in altitude. In some regions, as in the Western mountains, the land rises from 5000 to 10,000 feet above sea level; but the low central plains of the Mississippi Valley are only a few hundred feet above sea level. There are other large stretches of territory, especially on the Eastern coastal plains, in which the land is almost at the level of the sea.

Fourth, the differences in mineral resources. Some states, like Pennsylvania, Ohio, and West Virginia, have valuable deposits of coal. Others, like Minnesota and Wisconsin, contain the world's most important iron mines. Others, like southern California, Oklahoma, and Texas, have lakes of oil beneath the surface of the earth. But other regions have no coal, no iron, no oil, almost no fuels, and no metals.

It is clear, therefore, that there are important differences between the regions of the United States. Is it not natural, then, that the life of the American people should be different in these different regions?

Books You Would Like To Read

See the titles at the end of Chapter XXXI.

CHAPTER XXXI

What Nature and Man Built in North America

Do YOU see now that the story of *The Building of America* really tells how people from far-off countries of the world settled the great regions of our continent? In bringing our study of it to a close let us look back over it quickly.

Four hundred years ago only scattered Indian tribes lived on the land. Some, like the Iroquois, lived along the hills and valleys of the northern Atlantic plain. Others, like the Creeks, lived on the broad fields of the southern Atlantic coast. Still others wandered with the buffalo on the central plains and prairies or planted their fields under the shadows of the mesas of Arizona and New Mexico.

Four hundred, even three hundred, years ago these Indian tribes lived very much as the soil and the forests and the climate decided that they should live. The kinds of houses they built, the food they raised, their clothing and their tools, even their games and festivals, were decided by nature. Thus, even though these Indians had lived here for nobody knows how long, they had not conquered the resources of North America.

The building of North America started after 1600 A.D., when the white people came from Europe to make their homes. For 1000 years and more the English and French and other Europeans had been conquering their lands. They had learned how to build strong and attractive houses, how to raise grain and vegetables, how to make warm clothing, and how to do other things in a "civilized," or advanced, way.

Of course the Europeans brought their knowledge of agriculture with them to North America, as well as their tools and weapons, their household furniture and utensils. With these things they set about the building of a great country on the new continent.

In the early days of these first settlers they had to work very, very slowly in the strange wilderness. Indeed, it took more than 150 years after 1600 A.D. to clear the forests and stony lands and build villages and farms on the Atlantic plain.

After 1770 they began to move westward. During the next hundred years millions of them crossed the Appalachians, settled the Ohio and Mississippi valleys from Canada to the Gulf of Mexico, faced the dangers of the grazing plains and the Rockies, and made homes in the beautiful valleys along the Pacific coast. Within that exciting hundred years the land of America was really conquered — the soil and the forests on top as well as the iron and coal and oil underneath.

In the whole history of the world there has never been any movement of people or any building of a country as hurried as that American westward movement. In 1790 there were only 4,000,000 people in our country, and most of them lived on the narrow Atlantic plain. In 1890 there were more than 60,000,000 Americans — fifteen times as many — who were living on farms and in villages, busy towns, and large cities scattered over the continent.

That was the building of America! The natural regions had been filled in with people and their civilization. Nature and man both played their parts. Nature supplied the stimulating climate, the fine soil and forests, the rich treasures in the ground; man supplied the courage and imagination and the steady hard work to build different ways of living in these natural regions.

Just what kind of place to live in is America now? What kind of country can it become? These and other important questions we shall read about in later books.

Books You Would Like To Read

- ALLEN, N. B. United States. Ginn and Company, Boston. A geographical and industrial reader.
- AUSTIN, MRS. M. The Children Sing in the Far West. Houghton Mifflin Company, Boston. Poems which tell of scenes in the great Southwest.
- CANFIELD, DOROTHY. Understood Betsy. Grosset & Dunlap, New York. A little girl's adventures on a Vermont farm.

- CHAMBERLAIN, J. F., and CHAMBERLAIN, A. H. North America. The Macmillan Company, New York. An excellent geographical reader.
- FOGLER, DORIS, and NICOL, MRS. NINA. Rusty Pete of the Lazy A B. The Macmillan Company, New York. Life on a Western ranch.
- GOVAN, C. N. Those Plummer Children. Houghton Mifflin Company, Boston. The story of a group of children who live in a small Southern town.
- JACKSON, H. H. Nelly's Silver Mine. Little, Brown, and Company, Boston. Nelly and her brother go to live in Colorado, and Nelly discovers a silver mine. Good picture of life in the West.
- KNOX, R. B. The Boys and Sally Down On a Plantation. Doubleday, Doran Company, Garden City, New York. Good description of the activities on a large cotton plantation in Alabama.
- LINDSAY, MAUD. Little Missy. Lothrop, Lee & Shepard, Boston. Life on a Southern plantation.
- MITCHELL, L. S. North America. The Macmillan Company, New York. Interesting stories and facts in a book written for beginners in geography. Excellent illustrations.
- MITCHELL, L. S., and LAMBERT, CLARA. Manhattan Now and Long Ago. The Macmillan Company, New York. See especially pages 3-47 for stories and descriptions of the harbor life of a port city.
- NATHAN, MRS. A. G. The Farmer Sows His Wheat. Minton, Balch & Co., New York. The story of wheat-growing in America and of the regions in which wheat is raised.
- PITKIN, WALTER B., and HUGHES, HAROLD F. Seeing America. Book I, Farm and Field; Book II, Mill and Factory. The Macmillan Company, New York.
- SOUTHWORTH, G. V. D., and KRAMER, S. E. Great Cities of the United States. Iroquois Publishing Company, Inc., Syracuse, New York. Descriptive and historical sketches of thirteen of our most important cities.
- TAPPAN, E. M. Makers of Many Things. Houghton Mifflin Company, Boston. One of a series of four industrial readers.

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KEY: You say *ă* as it is in *can*; *ā* as it is in *cane*; *ā* as it is in *father*; *ā* as it is in *bare*

ē as it is in *bet*; *ē* as it is in *be*; *ē* as it is in *her*

ī as it is in *hid*; *ī* as it is in *hide*

ō as it is in *not*; *ō* as it is in *note*; *ō* as it is in *horse*

oi as it is in *oil*; *ou* as it is in *out*

ōō as it is in *foot*; *ōō* as it is in *food*

ū as it is in *use*; *u* as it is in *sing*; *th* as it is in *that*

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